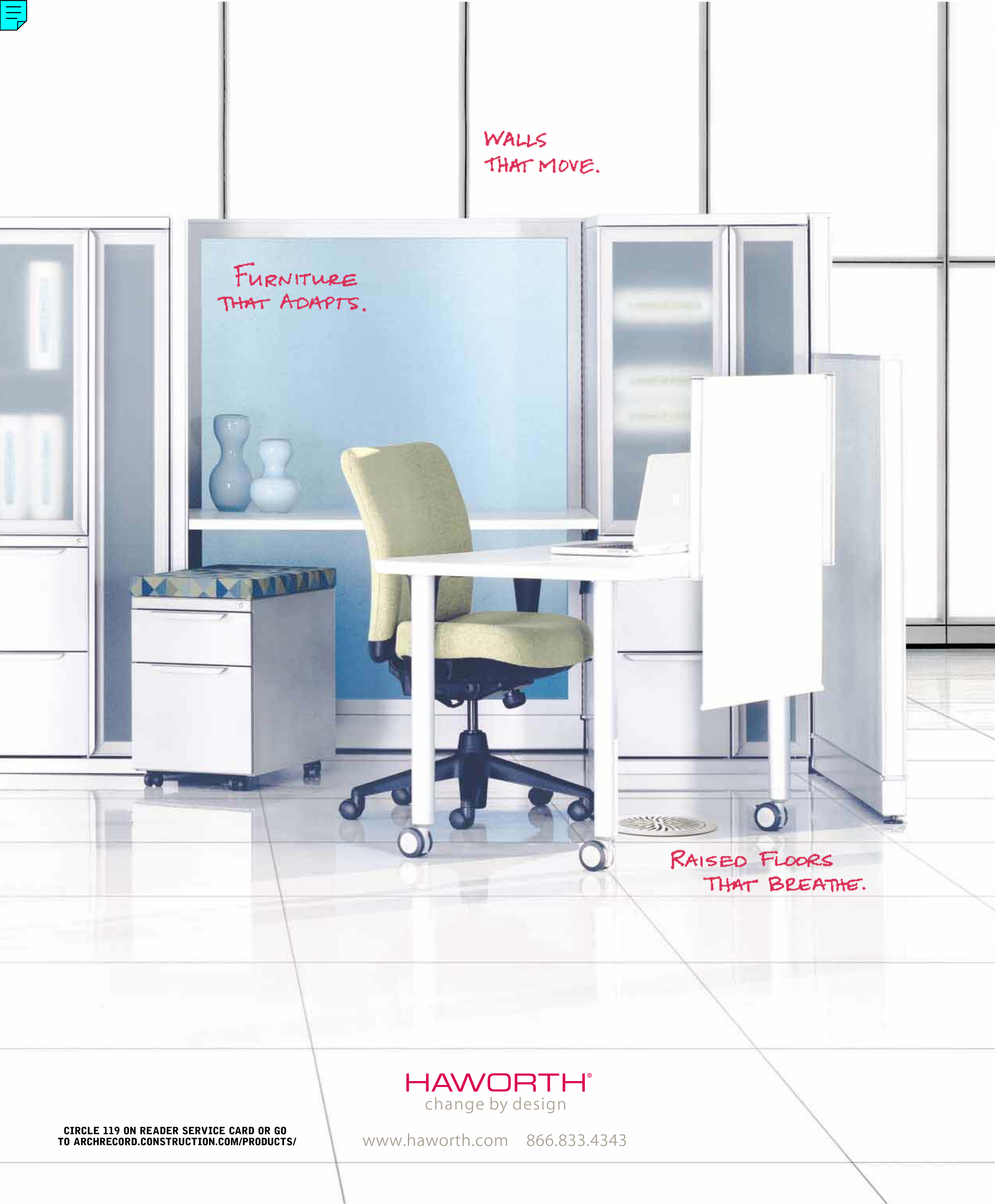

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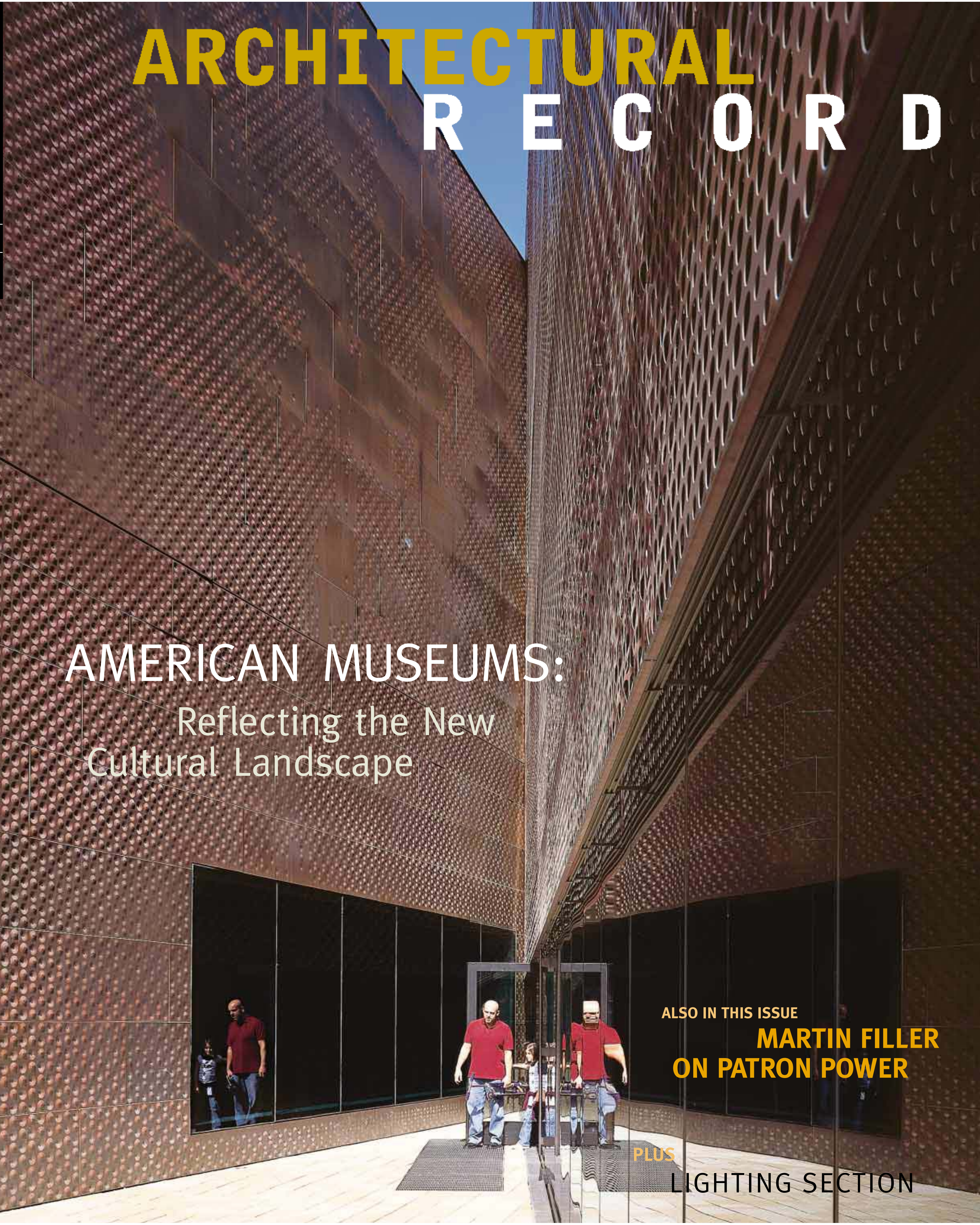

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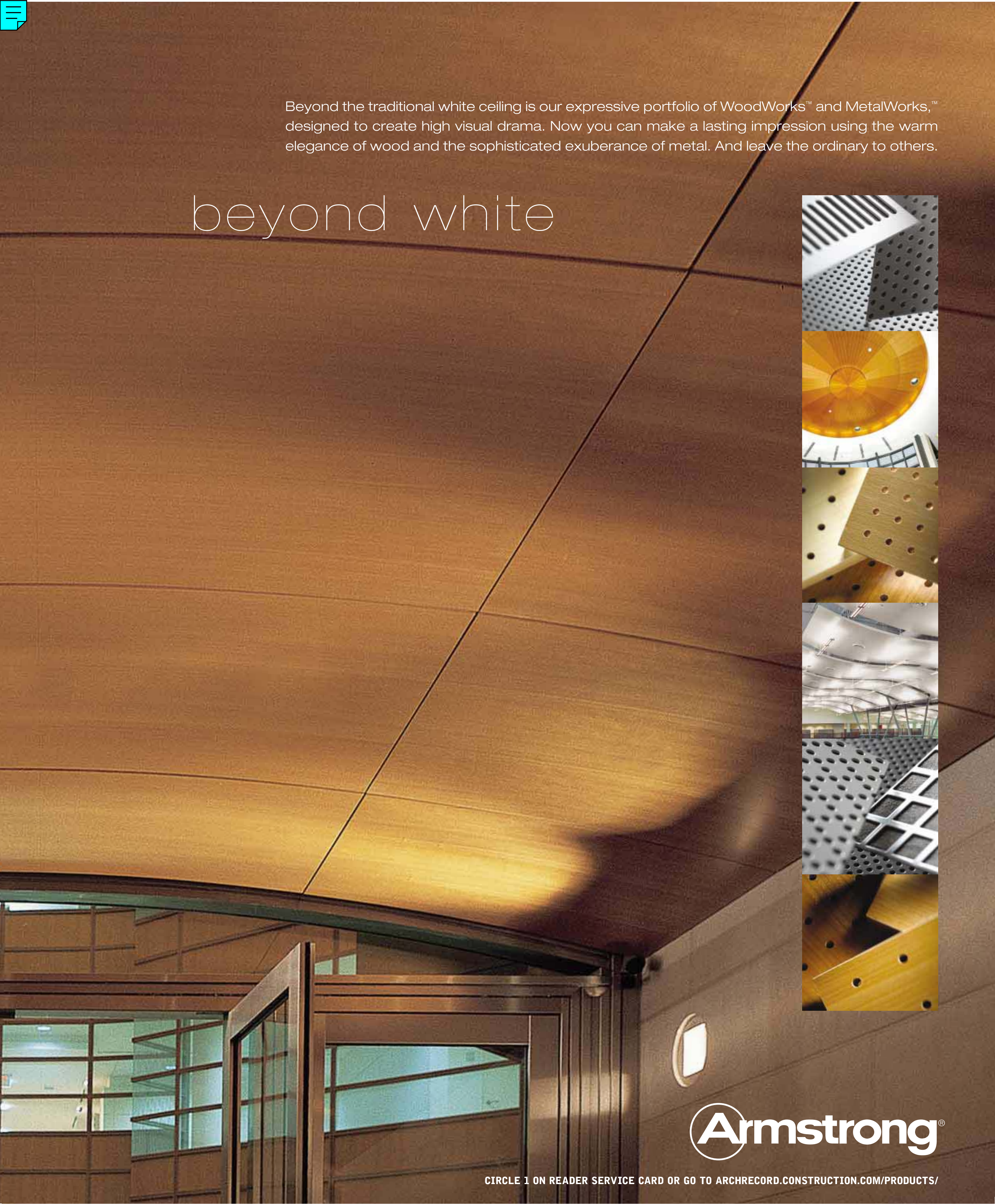

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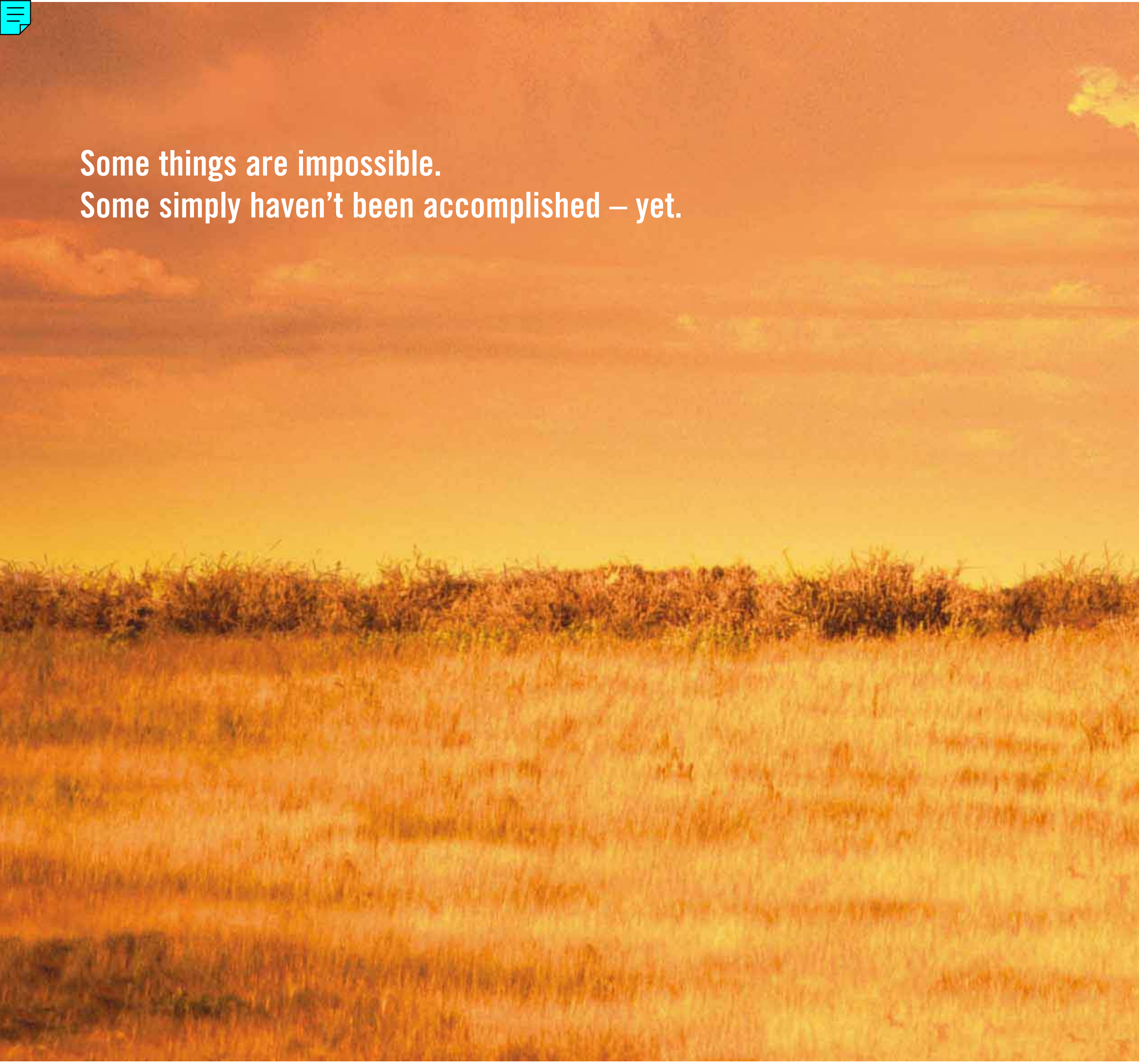
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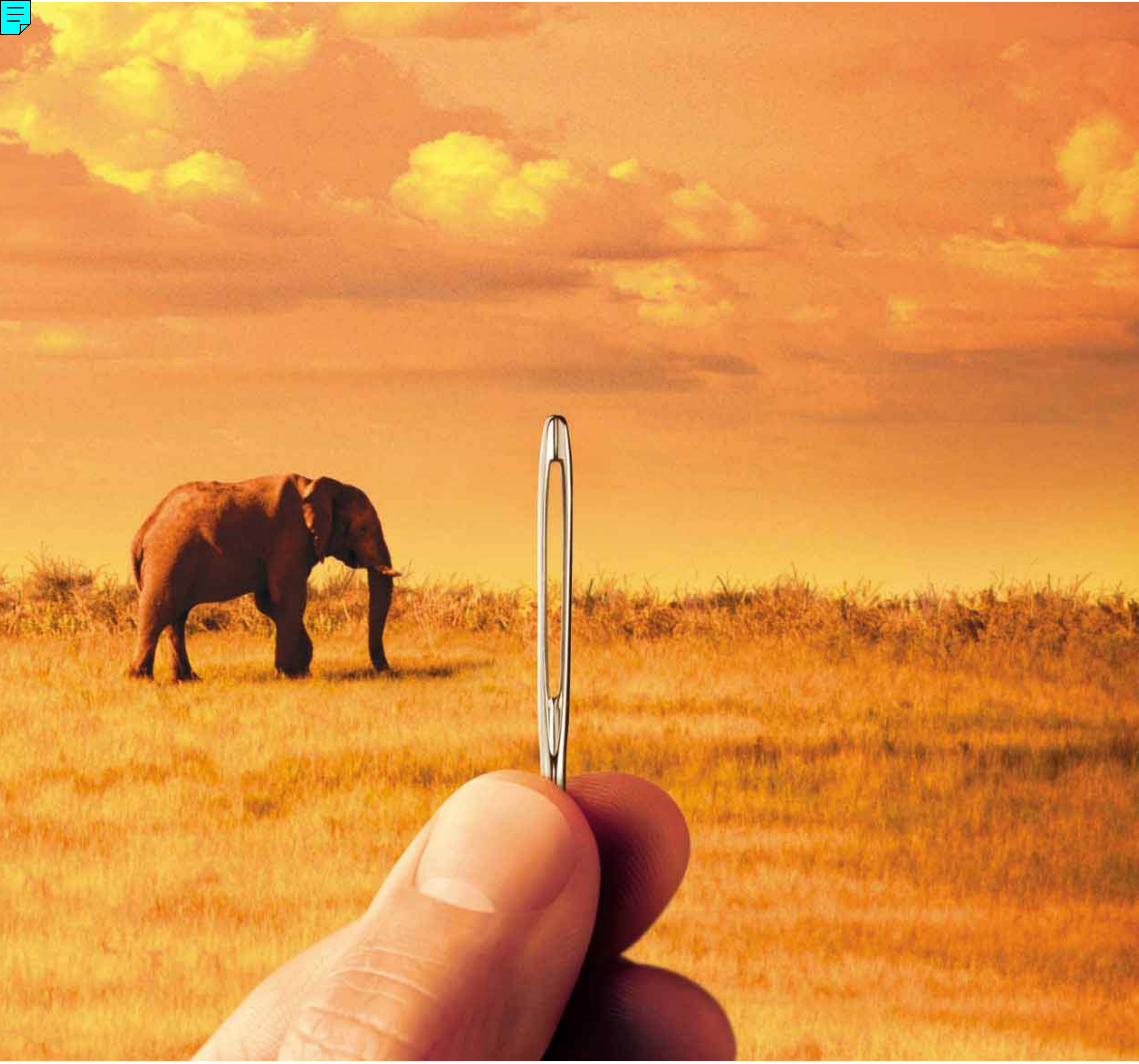

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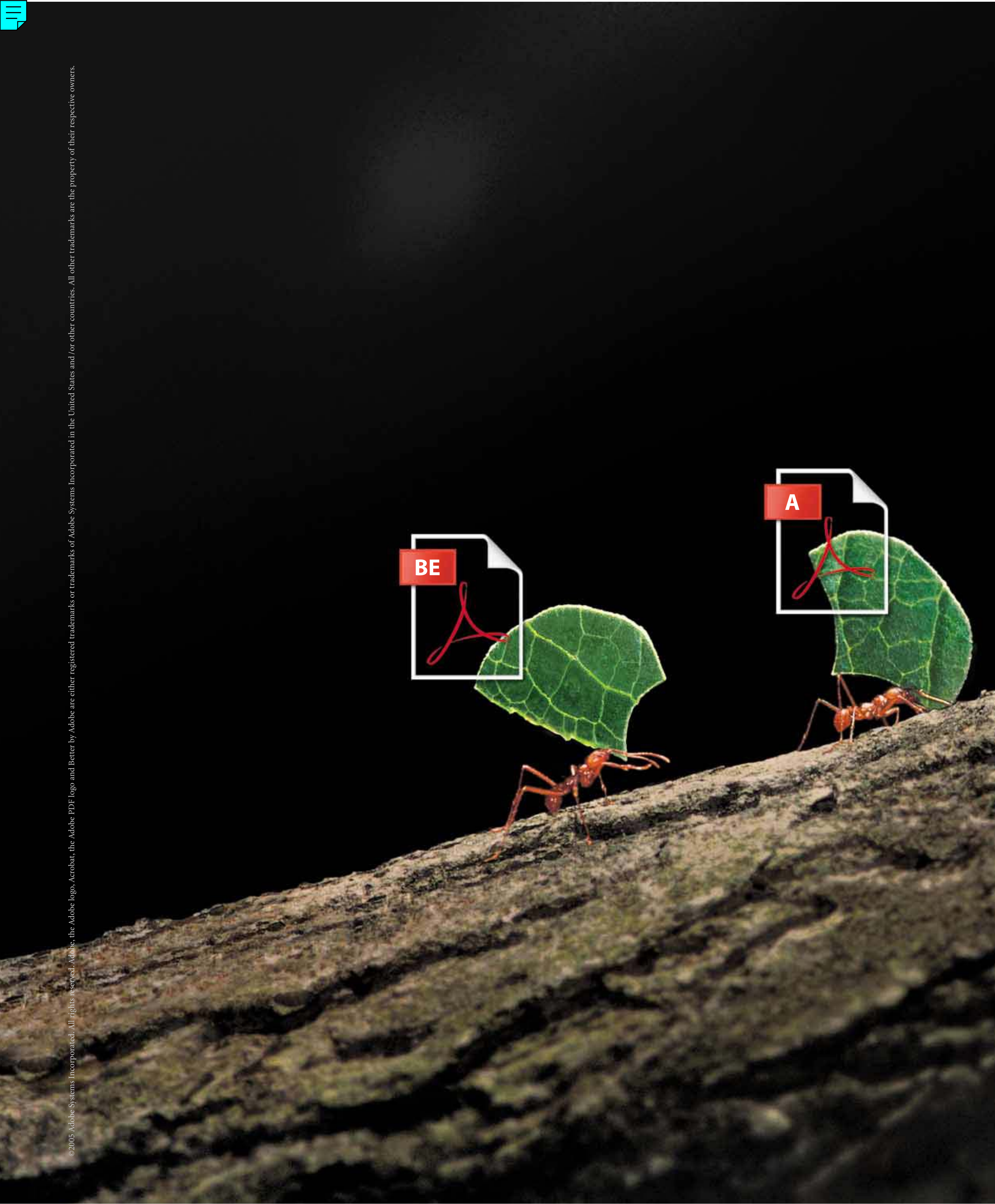

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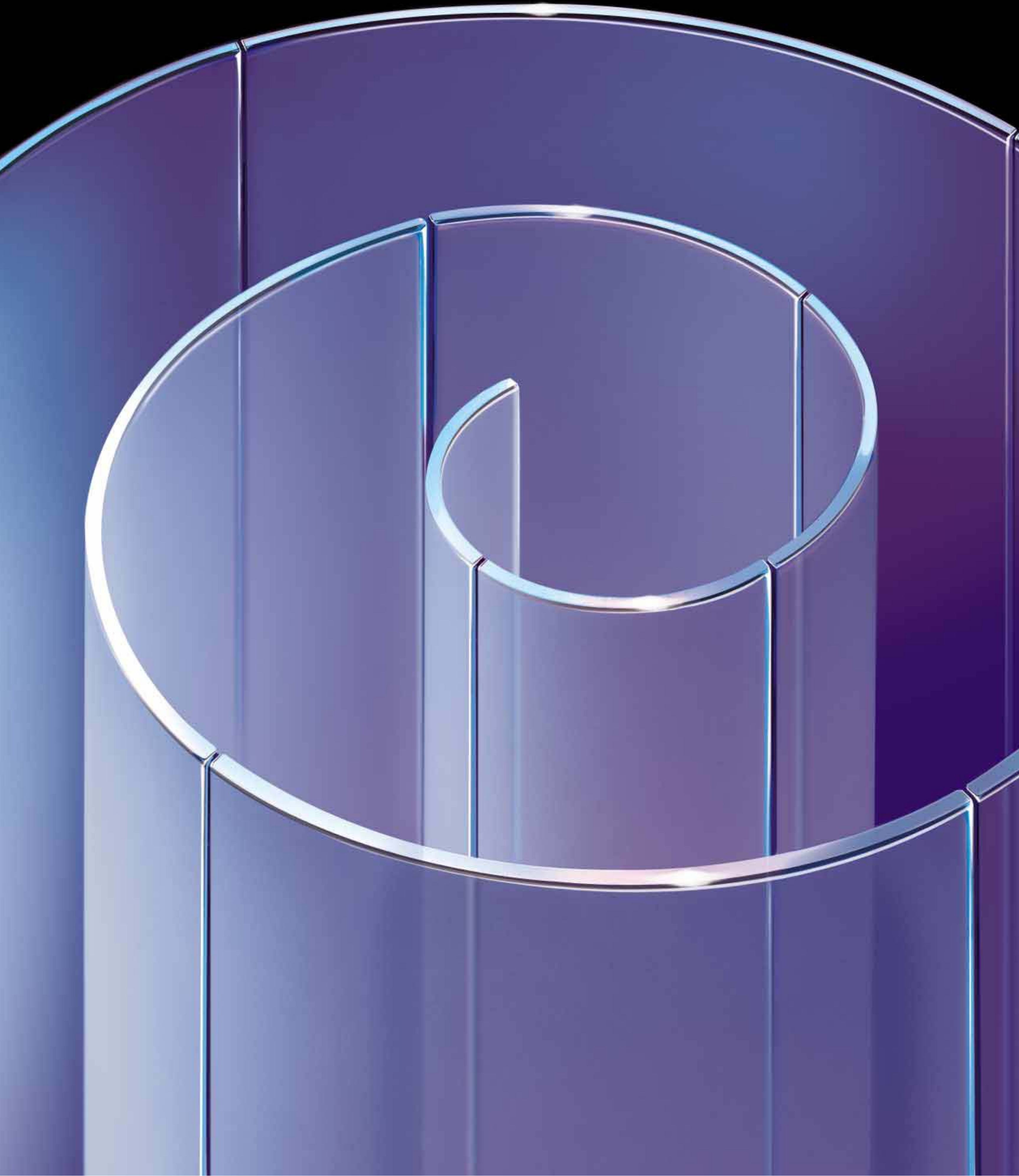

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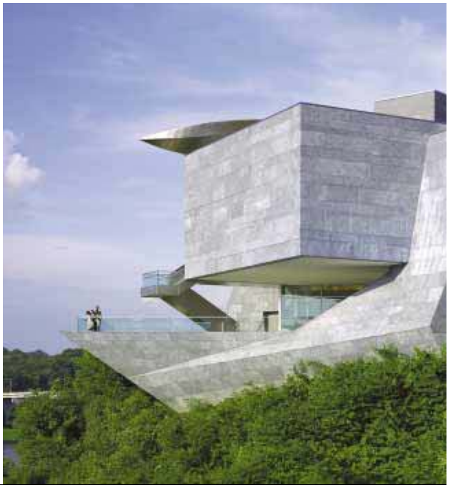

On the Cover: *de Young Museum, by Herzog & de Meuron. Photograph by Nic Lehoux*
Right: *Hunter Museum addition, by Randall Stout Architects. Photograph by Tim Griffith*

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Daylight in the Office Space

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LEARNING OBJECTIVES:

- Identify potential benefits and dangers of incorporating natural light into an office space.
- Understand strengths and weaknesses of different natural light control systems.
- Specify appropriate fabric characteristics for shading to meet project requirements.

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The Green Market Reaches Critical Mass

A New Survey Finds a Growing Commitment to Green by Architects and Product Manufacturers

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LEARNING OBJECTIVES:

- Have an increased understanding of the expanding green market and its different sectors.
- Find sources of research findings on building energy conservation, productivity and efficiency.
- Appreciate the importance of informed selection and specification of green products and materials.

This month at archrecord.construction.com

Building Types Study–Hospitality

What do today's hotel restaurants and other interiors look like? Leave your preconceived notions in the lobby as you tour dining rooms and other public spaces designed by Adam Tihany, Yabu Pushelburg, Ian Schraeger, and many others. On our Web site, discover nine extra projects not available in print and take a virtual step inside the sleek interior of New York City's The Hotel on Rivington.

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Project: Shangri-La Hotel, Singapore
Photo: Sam Nugroho

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An architect in Oakland finds out that collaboration is key while a group of architecture students in Virginia gain a hands-on experience in ecological correctness.

Project: Submission to the 2005 Chicago Prize
Courtesy: ellipsis a+d

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Record Houses cover.
Mid-May 1970

50 Years of Record Houses

This month we bring you a house from the past that has been through a major overhaul. Also, peruse images from our "Forever Modern" exhibit and opening reception.

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New Orleans
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What Architects Can Do

Editorial

By Robert Ivy, FAIA

In the cascade of catastrophes occurring in 2005, none struck Americans more forcefully than Hurricanes Katrina and Rita. In response to the images of drowned cities and blasted coastlines, architects throughout the country have asked, "What can I do?" Architects are trained to plan and to build, and many have faced disasters in their own communities. The scope of these natural disasters has provoked an unprecedented flurry of ideas and goodwill, from a directory of relocated Louisiana architects and large-scale voluntary damage assessment by professionals coordinated by the American Institute of Architects to a variety of public forums and unsolicited designs.

The most focused and carefully organized thus far was the "Rebuild Mississippi" forum, held from October 10 to 17. Commissioned by that state's governor and abetted by his director of economic development, the entire program was financially underwritten by former Netscape C.E.O. Jim Barksdale and the Knight Foundation. For an intense week, local architects teamed with representatives of the Congress of New Urbanism (CNU), led by the indefatigable Andres Duany (and Elizabeth Plater-Zyberk), together with engineers, planners, and representatives of local government, who met at the still-standing Isle of Capri hotel in Biloxi, Mississippi. Their efforts spread far beyond the tender imaginings of Seaside, to rethinking an 80-mile stretch of prime coastline, now laid waste.

This rethinking had nothing to do with style per se, and everything to do with planning. In a crowded ballroom, devout local modernists shared the table with historicists and preservationists. In fact, the CNU was superbly positioned to tackle a broad geographic area that had comprised a necklace of small towns: from Bay St. Louis and Waveland in the west, past Gulfport and Biloxi, to Pascagoula on the eastern extremes. None ranked among the country's largest cites; all retained small-town character, and each contained unique personality and historic culture. Ocean Springs, for example, had served as the original capital of French Louisiana in the early 18th century and today contains a treasury of cottage architecture. Who better to delve into the local milieu, to seek the fine-grained facts that constituted home for several hundred thousand people than these emphatically mixed teams?

They came prepared. For 20 years, Duany and his devotees have conducted charrettes throughout the country, sometimes two per month. In Biloxi, they rolled up their sleeves for a difficult week ending on Monday, October 17, when they presented their findings and ambitious suggestions to the municipalities. Their proposals extended beyond the immediate to the festering. The Gulfport team tackled its problematic public docks, whose traffic had bisected a vital highway and the downtown, proposing a viaduct that could be infilled with habitable spaces for commerce. The Biloxi team envisioned a gambling precinct, meant to rival Las Vegas, that would stand above flood stage. Roads would have to be raised; engineering would have to be commensurate with hurricane force winds. The scale of such multidimensional planning in a short time was daunting. The designers' optimism and energy, which represented all of us working in a collaborative effort, embodies the architectural spirit at its best—they were our hands and eyes.

The bitter truth

However, another, darker face shadowed this task: The scope of Katrina's destruction can be described as apocalyptic. Traveling by helicopter down the length of the Mississippi coast, the devastating view stretches as far as the eye can see. No single image, on television or in print, conveys the magnitude of the tidal surge's destructive power, which rolled ashore more than 28 feet high in some places (at least 50 feet at tiny Link, Mississippi), pulverizing all in its path. At the town of Waveland, nothing (nothing!) remains standing: The wind, wave, and water action combined to reduce any remnant of human construction to dust and washed it all away. None of us, save those few who witnessed Dresden or Hiroshima, perhaps, can relate to the total ruin there.

What should happen in the face of the disaster? FEMA and the

PHOTOGRAPHY: © ANDRÉ SOUROUJON

federal government have already provided a partial answer by mapping zones in which structures must rise to a certain height to avoid future calamity. In the most stringent, the "V" zone, the preliminary beginning point for any new building rises up to 21 feet above sea level. That means that for a single-family residence, the floor plate effectively commences at tree-house height, an untenable and expensive demand, effectively killing the prospect of the private residence. While municipalities are free to accept or decline the designations, commercial lending and insurance depend on meeting FEMA expectations.

While FEMA's demands may seem onerous, in a sense, this federal authority is doing what no polity could do: setting guidelines recognizing that devastating storms have blasted the coast twice in 35 years, and that private property sometimes has to bend to the social contract. None of us would wish another Katrina, but strong storms have killed hundreds here and will return, costing billions of dollars, for Mississippians and for other U.S. citizens. The Coast is the entire nation's problem.

As an alternative to such guidelines, we might consider turning the lowest land—most subject to flooding, tidal surge, and destruction—to linear parkland along the Gulf. Passersby would travel long distances to soak up the silky air and drink in sunsets, enjoying miles of live oaks and green parks on land formerly characterized as a privileged residential enclave. Dense urban nodes, constructed of properly engineered, hurricane-resistant construction would punctuate the strand, culminating in the casino districts that provide the economic base of the Coast and the state. All of the Rebuild Mississippi team's work remains valid and valuable in this scenario. The only modifications involve how far back from the waterline that intensive development would occur.

And for New Orleans?

The challenges surrounding New Orleans seem more metaphysical. While Mississippi's ravaged coastline presents itself clearly, the city of New Orleans faces economic, social, and even spiritual dilemmas: What defines this city's soul, and what will New Orleans become? In tackling such esoteric questions, the answers will not come easily or quickly. As a partial answer, the governor of Louisiana and the American Institute of Architects are organizing a conference, to be held November 10 to 12, to address questions overarching any rebuilding in New Orleans (see News, page 29). Planners, architects, artists, poets, and ordinary citizens, including those Orleanians in the diaspora, must weigh in to the discussions, before boundaries become fixed and the limits of the city are set. We at ARCHITECTURAL RECORD support the discussions and plan to assist.

Our contribution

No single aspect commands our collective attention more immediately than housing for storm victims. Estimates range upwards of 200,000 housing units, either totally lost or unsalvageable. What will replace them? Are there that many trees and nails available for the massive rebuilding effort? That much concrete? And with so many demands made on resources, how can the sheer numbers of housing units required be realized?

ARCHITECTURAL RECORD and McGraw-Hill Construction are focusing our resources on housing for New Orleans, joined in partnership with the Tulane University School of Architecture. Together we are holding an international competition, announced through this editorial, for two types of houses—single-family and multifamily residences—on a real lot in the Marigny section of New Orleans adjacent to the French Quarter. Entrants, who may be architects located throughout the world, should consider the unique character of New Orleans, as well as affordability, sustainability, mixed-use urban character, and manufacturing method, including prefabrication. The process of construction will be of equal importance to the resulting building.

A detailed set of competition guidelines can be found on our Web site, at www.archrecord.construction.com. All submissions will be due on March 1, and winners will be published in the May issue of ARCHITECTURAL RECORD. Other worthy projects will appear on our Web site.

What can architects do? We can contribute money and time to well-known charities. We can sign up for actual labor, assessing structures throughout the Gulf South. We can participate in the ongoing debate that will define the character and the future of an important quadrant of America. And explicitly, we can enter the competition to find new ways to house displaced New Orleanians.

As difficult as these months have proved, we must think beyond the events to the people and communities that will occupy the landscape again, recognizing that the forces that came ashore may wash over us again. At the time of this writing, Hurricane Wilma is consolidating into a massive storm headed, once again, into the Gulf of Mexico. Ian McHarg issued the challenge in the title of his iconic book: *Design with Nature.* To his renowned dictum, we add another: "And go to work."

Robert Ivy

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Letters

Looking ahead
Kudos on "Elegy for a Dream Queen" [Editorial, October 2005, page 31]. It was interesting to learn that Bob Ivy once lived in N.O., although in retrospect it seems logical. Every Southerner worth his/her salt has done time in the place that's the antidote to the South, not to mention the nation as a whole. My husband and I lived there from 1977–85.

After staggering through my initial period of grief and mourning, it has begun to occur to me that there could be some positive results from the disaster if the long view can assert itself once the immediate emergency is past. The city could fix some mistakes it made; i.e., the interstate that divided the Treme from the Quarter, and the lower from the upper Garden Districts.

While there's no comparison in terms of scale, here in East Nashville we survived a very bad tornado in 1998, and the winds turned out to be the agent used to push the 'hood forward. In significant part, that's because the AIA's R/UDAT, a swat team headed by Birmingham's Bill Gilchrist, one smart cookie, helped us to clarify the opportunities to turn catastrophe into catalyst. It may seem premature to ask, but I'm curious as to whether the AIA is thinking along these lines at all?
—Christine Kreyling
Nashville, Tenn.

The way we were
I read your "Elegy for a Dream Queen" this morning and wept. Although I have only visited and never lived in New Orleans, I loved the city, its music, and food. Of all the music that I love, Dixieland Jazz played in Preservation Hall is my ultimate favorite; I truly felt I had died and gone to heaven years ago when I sat on a wooden bench and heard the old jazz musicians jamming. It was an experience I shall never, never forget. In your elegy, you embodied the love and attraction that many feel for that great city. Reading this, I recall that great editorial you wrote following your experience during 9/11—you wrote that piece from the heart, just as you wrote the elegy I read this morning, and it shows. Thank you for putting into words what many are feeling.
—Sandy Dickerson
Earl Swensson Associates
Nashville, Tenn.

A terrible opportunity
Hurricanes Katrina and Rita have displaced tens of thousands of students and severely damaged hundreds of school facilities in the Gulf region. Before the storms, some $30 billion was expected to be spent this year on school construction in the U.S. Much more will be needed now. The challenge is to invest it wisely.

When I served several years as the president of the Board of Education for the Oklahoma City Public Schools, I learned firsthand how difficult it is to find the latest thinking in design, understand how architecture can serve the learning process, see examples of best practices, evaluate new financing options, and access all the other critical information needed to guide projects of this magnitude.

My experience in Oklahoma and work with educators and architects helped inspire the American Architectural Foundation's national initiative called Great Schools by Design. This program aims to improve the overall quality of America's schools by promoting good design, encouraging collaboration in the design process, and providing leading-edge resources to local school and community leaders.

As the communities of the Gulf region, and others across the country, think about new or renovated schools, they should design schools that retain and reflect the culture of the community they serve, and support lasting community involvement; build flexible classroom configurations to allow for smaller class sizes and multiuse; maximize natural lighting and natural ventilation; integrate technology throughout the school to support advanced teaching and learning and improve school safety; create spaces that incorporate outdoor environments, bringing the "outside" in to teach about the environment and sustainability; and develop a dialogue process that involves all community and school stakeholders in the planning.

The educational facilities we design today are expected to last 50 or more years. While the Gulf region has immediate needs for schools, it is important that we take the time to plan, design, and construct these facilities to serve the unique needs of each community. A "one-size-fits-all solution" is a sure recipe for failure. A failure we cannot afford in New Orleans, Los Angeles, New York, Philadelphia, Washington, or in any of the many cities needing significant investment in educational facilities.
—Ronald E. Bogle
American Architectural Foundation
Washington, D.C.

Why insist on rebuilding?
If our profession is going to move into new levels of leadership and be true champions of sustainable design and construction with the aftermath of Katrina and the promise of rebuilding so prominently in the news, then I believe we should ask the tough question of whether or not to rebuild in such a precarious place. Clearly, it was a mistake to build a large city in such a vulnerable flood-prone area, only to rely on a questionable system of levees and pumps for safety. These hurricanes have brought to life the magnitude of our ignorance, with man's insistence to build in areas where we should not. Why do we as practicing architects—and our profession as a whole, which professes to serve humanity—continue to support such ignorance?
—Michael A. McKay, AIA
Fort Wayne, Ind.

Press for worthy causes
Your extensive feature on the Robin Hood Foundation's incredible L!brary Initiative [September 2005, page 87] was hands-down the most inspiring story and collection of images that I have seen published in RECORD. It prompted me to draw a connection to another New York design initiative, critiqued by Robert Campbell [Critique, page 67] only a few pages earlier in that same issue. Although the locale is the only formal link between the two articles, one tells us a lot about the other. And despite Mr. Campbell's portrayal of the latest Freedom Tower as a veritable lost cause, it's hard not be inspired by his plea for architects to stand up for the beliefs we profess.

Libraries in many New York public schools could have once been labeled "lost causes," until the Robin Hood Foundation came along. Their initiative has given much more than new libraries and books to a few dozen New York schools; among many other things, it has given some of the city's most innovative firms and other in-kind contributors an opportunity to shape the lives of untold numbers of students, teachers, parents, and others. Few of the libraries will be awarded the kind of press that the Freedom Tower will continue to garner, which may hold some lessons for RECORD itself.
—John Cary
Executive Director,
Public Architecture
San Francisco, Calif.

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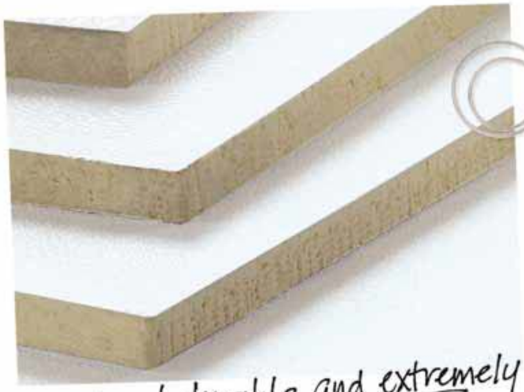

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AMERICA'S GOLDEN OPPORTUNITY: A TIME FOR ARCHITECTS TO ACT

Dear AIA Colleague:

America has embarked on the largest rebuilding effort in history. To fulfill our responsibility as architects, the American Institute of Architects is fully engaged with government agencies, public officials, and other groups advocating that sound planning and design principles guide the rebuilding effort.

In its role as advocate for the profession and a better built environment, the AIA believes the rebuilding effort should:

Let the People Lead. Who better to decide the future of their communities than those who call them home? The rest of us can assist and provide advice. For years, architects, planners, and others have been helping communities devise long-range plans for development and change, but local people have to set their own course.

Promote Creativity. This catastrophe demands out-of-the-box thinking. One idea is for the federal government to use a small portion of its reconstruction funding for "New Community Demonstration Projects." Cash grants, when packaged with proposed Gulf Opportunity Zone tax incentives, could spur construction of well-designed, strategically located, mixed-use communities. Once built, they would serve as models of community design, planning, and economic development. This is only one of the many responsible ideas proposed in the AIA's legislative recommendations, available at *www.aia.org/katrinarebuilding.*

Preserve the Past. Many buildings damaged by Hurricane Katrina are significant historic structures that tens of thousands have called home for generations. Rather than wholesale bulldozing, new incentives are needed to preserve not just major landmarks but the small houses and neighborhoods that are treasures of America's past.

Buy Local. Thousands of architects, engineers, and others in the building trades have been displaced by this catastrophe. Give local designers, builders, and workers priority when awarding contracts. Why? They know the land, climate, and culture better than anyone, and it would benefit the ravaged economies.

Think About the Future. Plan an orderly transition from temporary to permanent solutions. We must show that temporary is only temporary, and that permanence means not only buildings and infrastructure, but where the lives and hopes of people and their communities are rebuilt.

It's Not Just the Storm Zone. Houston and Baton Rouge have swelled in population. Plenty will remain there for months, some forever. These cities face new infrastructure challenges which also require national attention and assistance. We urge architects across America to lend their voices to this effort. Write your members of Congress by going to our Web site at *www.aia.org/advocacy*. Urge them to support the AIA's legislative agenda. Advocate on behalf of sound planning and design principles—and for the inclusion of architects as part of the process. To learn how you can contribute financial and other support to your fellow architects, go to *www.aia.org/katrina*.

If New Orleans and the Gulf Coast are rebuilt the right way, we increase the chance that this national tragedy will become America's golden opportunity. That is an opportunity we cannot afford to lose.

Norman Koonce

Douglas L Steidl

Norman L. Koonce, FAIA
Executive Vice President/CEO

Doug Steidl, FAIA, MRAIC
President

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Record News

Highlights

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SPECIAL HURRICANE REPORT

Architects fight for a role in rebuilding after Katrina and Rita

The architecture community has rallied for victims of Hurricanes Katrina and Rita, and in some ways its sympathy is easily quantified: As of mid-October, more than $100,000 had been pledged to the organization Architecture for Humanity (AFH), and the AIA Web site had registered offers of pro bono services from more than 600 architects.

But the difference between offering to do the work and getting to do it can be frustrating. Many architects perceive the disasters as opportunities to implement good design principles throughout the Gulf Coast. However, several developments taking shape suggest that design professionals are being excluded from initial relief and planning efforts. New Orleans Mayor C. Ray Nagin's 17-person Bring New Orleans Back advisory committee does not include any representatives from the design fields. Rather, that committee has approved an Urban Land Institute proposal to advise the master visioning process for three months. Further, FEMA-contracted companies establishing temporary housing communities have not awarded subcontracts to architects and planners. A spokesperson for Bechtel, John Schlatter, confirms that "[Bechtel is] not engaged in any significant design or architectural work." Bechtel has already installed more than 7,000 housing units in three Mississippi counties. CH2M Hill spokesperson Tessa Anderson says, "We're just trying to move trailers and build necessary infrastructures." Habitat for Humanity spokesman Joedy Isert says the goal "is to build as many homes as we can fund," but says these will be "traditional Habitat homes" built from a kit of parts, precluding architectural services.

"Already I see the potentially valuable expertise of architects, especially local practitioners, going untapped," says John Messina, a New Orleans–born architect now at the University of Arizona. "As a profession, we too often have had no input in the economic/political planning discussions that shape cities."

The fear that architecture and design might go underutilized inspired Michael Barranco, founder of his eponymous architecture, interiors, and planning firm in Jackson, Mississippi, to introduce architect and planner Andres Duany to Mississippi Development Authority executive director Leland Speed and Governor Haley Barbour. That meeting led to a mid-October charrette in Biloxi for 11 Mississippi Gulf Coast communities, organized by the Congress for New Urbanism (CNU) (see story, page 32). John Robert Smith, mayor of Meridian, Mississippi, notes, "Absent a process like this, I think you could be in real danger of making critical design and engineering mistakes that haunt you for the next 50 years."

Temporary trailers roll down to the hurricane-stricken region.

A kit-of-parts Habitat for Humanity house.

In a similar spirit of optimism, a constellation of independent efforts is under way to allow designers to lend their services. In September, the AIA held a building-assessment training course for 120 architects in Mississippi. Members will assess structures' rebuilding potential free of charge. In Louisiana, local, state, and national AIA components are sponsoring a conference from November 10 to 12, probably in New Orleans, focusing on recovery in that state. The event, a goal of Louisiana Governor Kathleen Blanco's 24-member Louisiana Recovery Authority, will bring together a wide array of players, including designers, business officials, politicians, school boards, realtors, engineers, planners, and local neighborhood groups to discuss rebuilding communities, historic preservation, infrastructure, economic development, and several other issues.

The World Monuments Fund and the National Trust for Historic Preservation have partnered to advocate for restoration and sensitive reconstruction measures that respect the historic assets of the region. The Mayors' Institute on City Design will hold two special design institutes in Biloxi, Mississippi, and New Orleans to join design experts with mayors from the region. The Jackson, Mississippi, Community Design Center prepared homes for coastal evacuees and helped plan the CNU charrette.

Looking ahead to future plans, Architecture for Humanity cofounder Kate Stohr says that the group will work with the Heritage Conservation Network and the Foundation for Historical Louisiana on a design competition for a contemporary shotgun house. ARCHITECTURAL RECORD and Tulane University are planning a housing competition of their own for the region (see Editorial, page 17). Tulane's Architecture dean, Reed Kroloff, also says that the school is considering an event to join community members with university and nonprofit design experts.

Interviewees agree that it is too early to determine whether architects will be able to significantly sway the course of rebuilding for the better. And in New Orleans, design is not necessarily the first priority: "There's plenty of competition to give advice to New Orleans," says CNU president John Norquist. Kroloff synopsizes the mixed outlook: "Architects are not at the center of the decision-making process, as usual. On the other hand, they haven't been eliminated from the conversation entirely; they are taking part." *David Sokol with Sam Lubell*

PHOTOGRAPHY: © AP PHOTO/MICHAEL CONROY (BOTTOM); HABITAT FOR HUMANITY (TOP)

SPECIAL HURRICANE REPORT

Damage figures become clearer, while officials grapple with what can be saved

Hurricanes Katrina and Rita spent only a matter of hours in the Gulf Coast region. Their aftereffects, however, will be felt for years. The region lost between 275,000 and 300,000 homes and roughly as many were damaged, according to the AIA. Figures for nonresidential buildings and infrastructure were not available at press time, but in an illustration of the extent of damage, a spokesperson for the Louisiana Department of Economic Development estimated that 5 billion board feet of lumber and 3 billion square feet of paneling would be needed for rebuilding and repairs in that state alone. Most of the repair and rebuilding in the region is likely to be completed by the end of 2008, according to research by the AIA.

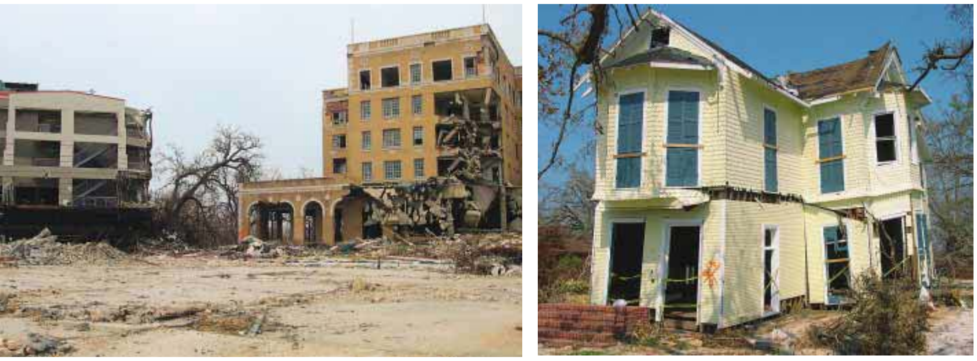
Shortly after Katrina, architects, engineers, and other specialists joined local and national authorities in surveying the damage resulting from high winds, storm surges, and generalized flooding. The effects of polluted water on buildings were hard to gauge, according to experts.

In New Orleans, wind damage was greatest in buildings four stories and taller, whereas one- and two-story wood buildings bore more damage from flooding, according to engineer Stephen Kelley, a consultant with Northbrook, Illinois–based Wiss, Janney, Elstner Associates, who toured sites in Mississippi and Louisiana.

Termite damage in wood frames, along with previous flood damage, left many buildings vulnerable, Kelley noted. The flooding and storm surges undermined foundations, washed out walls, soaked and destroyed insulation, carpets, wood, and drywall. Much of the water-soaked material will need to be stripped out of buildings, although older wood, with its denser growth rings, is more resilient, and plaster can be saved in some cases. Fortunately, the region's dry season is expected to aid the airing out, which, with bleach or other disinfectants, will allow many wooden buildings to be salvaged, according to Kelley.

Not surprisingly, buildings of lightweight, particularly newer, construction suffered heavy damage, according to Charles Harper, FAIA, of Harper Perkins Architects in Wichita Falls, Texas, who toured areas in Texas and Louisiana. In Gulfport and Biloxi, Mississippi, which saw a spate of hasty construction in the mid-1990s, many of the houses of that era were lost. Similarly, big-box and warehouse buildings along the coast did poorly. "If you've got big walls with no pressure release, they're just blown out," he said.

While many older buildings withstood the hurricanes, the cost of repairing them can be significant. In the meantime, preservationists worked to prevent the wholesale razing of buildings. "[Claims adjusters] will tend toward writing buildings off," Kelley said. "The challenge is to not go along with that."
Ted Smalley Bowen


The extent and the type of damage from Hurricane Katrina varied according to building type.

Louisiana senators introduce hurricane relief bill

Louisiana's Senators Mary Landrieu (D) and David Vitter (R) have proposed legislation to provide about $250 billion in federal aid to help their state rebuild from Hurricanes Katrina and Rita. The massive, 10-year plan, contained in a bill introduced on September 22, includes about $180 billion in direct federal spending, Vitter said. The rest would represent the cost of various tax breaks. Already, Congress has approved $62.3 billion in post-Katrina relief aid for Louisiana and other Gulf Coast states. The Office of Management and Budget has said further spending would be requested.

The Landrieu-Vitter package would draw most of its funds from federal appropriations, but they also are seeking 50 percent of the revenue from oil and gas leases off their state's coast, or about $3 billion and $4 billion annually. Those revenues would go toward restoration of coastal wetlands and barrier islands as well as infrastructure.

The energy bill signed into law in August provides Louisiana with $135 million in annual oil and gas lease revenue for four years to be used for coastal restoration work. The new plan also includes more than $16 billion for transportation, of which $2.9 billion would be allocated for emergency relief aid to repair highways and other infrastructure; $50 billion in Community Development Block Grants "to provide disaster relief and promote long-term recovery" in the affected area; and $40 billion for a new Pelican (Protecting Essential Louisiana Infrastructure, Citizens and Nature) Commission to study flood protection, coastal restoration, and navigation projects.

The legislation also would allot $150 million to the National Park Service for historic preservation grants "to owners of historic structures and artifacts affected by Hurricane Katrina," says the bill summary. The nonfederal matching share for the grants will be 25 percent, instead of the usual 50 percent. The nonfederal match could be cash or services, labor or equipment. The program would be administered together with the State Historic Preservation Office and National Center for Preservation Technology and Training in Natchitoches, Louisiana.

In addition, the measure would provide $30 million to the Park Service for preservation grants for National Historic Landmarks, plus $8 million for technical assistance and training for people who want to restore historic property, and $20 million for the Trust's preservation services. Landrieu says she recognizes that the sum she and Vitter are seeking is large, but she says, "It's not a local problem. It's not a state problem. It's a national tragedy and it needs an unprecedented national response."

Senator Tom Coburn (R-Okla.) and other GOP colleagues want at least some of the federal hurricane relief spending to be offset with spending cuts. Among their suggestions is a 5 percent cut in discretionary spending other than defense and homeland security, and rescinding $24 billion in highway projects in the recently enacted highway and transit bill. ***Tom Ichniowski***

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SPECIAL HURRICANE REPORT

Architects and planners weigh in on how to rebuild the Mississippi coast

In October, while a charrette conducted by the Congress for the New Urbanism tackled the problems of recreating the storm-crushed Mississippi Coast's towns and cities, a number of architects and planners voiced the following suggestions, predictions, and warnings:

"What concerns me is the word 'new' in New Urbanism. I think it needs to be more of a vernacular urbanism. The magic happens when you bring the vernacular and the zeitgeist together. We don't need Seasides all over the coast. We need towns that look like the towns that were there. We can't just forget all the historic buildings we've lost. I struggle with the idea of replications."

—BELINDA STEWART, AIA, BELINDA STEWART ARCHITECTS, EUPORA, MISS.

"There's going to be a lot of push for communities to rebuild exactly as was, which would be a mistake. With two hurricanes coming back-to-back, we're in a whole new weather realm, and the first question that should be asked is: Should rebuilding occur along coastal areas? To build and rebuild in low-lying areas puts people in danger and affects us all through insurance rates. I hope communities that do rebuild do it smarter, make egress plans, and implement standard building codes."

—TERRANCE BROWN, FAIA, ASCG INCORPORATED, ALBUQUERQUE, N.MEX.; CHAIR, AIA DISASTER ASSISTANCE PROGRAM

"In the Gulf, people tend to not want to adhere to codes. Most of the residential construction wasn't built to current building codes. Developers and builders are going to have to be mandated to build quite differently than for suburban or tract developments. I think rebuilding will be largely driven by multinational AE corporations that already have contractual relationships with FEMA, such as Flour Daniels, Halliburton, the Shaw Group, and DMJM-Harris."

—RAY MANNING, AIA, MANNING ARCHITECTS, NEW ORLEANS (TEMPORARILY IN BATON ROUGE, LA.)

"After a disaster, the sense of loss encourages conservatism, wanting to just get back what is lost. People who've lived in a place generation after generation won't want a visionary 21st-century town, and governments are least able to move in visionary ways. I don't think that we build communities in America. We build pieces of communities in a messy way. I have yet to see New Urbanist charrettes lead to anything. Our democratic processes are so slow and inefficient, there'll be five years of discussions."

—FRANCES HALSBAND, FAIA, KLIMENT/HALSBAND, NEW YORK CITY.

Main Street in Bay St. Louis, Mississippi.

"The Mississippi Gulf Coast is no longer; it's like pickup sticks. To bring some structures up to stricter codes won't be affordable. Maybe we will build less expensively, but design schools to be hurricane shelters."

—MICHAEL BARRANCO, AIA, BARRANCO ARCHITECTURE, JACKSON, MISS.

"We don't want a rushed process, and we don't want to rebuild the coast exactly as it was. You have to understand the dynamics of the Gulf Coast. It used to be a vacation and resort area for Louisiana and then changed, with casinos building on barges. The casinos own land and will want to start building immediately. You also have to understand that each community has its own identity, and each lost so many older homes that helped shape identity. Charrette organizers will have to send many teams to work with each community. To plan the entire Gulf, about 120 miles of coastline, is overwhelming."

—RICHARD MCNEEL, AIA, JOHNSON BAILEY HENDERSON MCNEEL ARCHITECTS, JACKSON, MISS.

At Mississippi charrette, planning for the future

The Mississippi Governor's Commission on Recovery, Rebuilding, and Renewal aims for no less than an "economic renaissance for coastal Mississippi," says its chairman Jim Barksdale, a former president and C.E.O. of Netscape. To help create a physical plan, state officials invited New Urbanist Andres Duany, FAIA, to lead a charrette last month in Biloxi, one of Hurricane Rita's hard-hit areas. Joining him were more than 100 members of the Congress for New Urbanism, including transportation planners, environmentalists, code writers, sociologists, and representatives of such large AE firms as SOM, HOK, HDR, and UDA. Some teams dealt with regional issues, and others visited the three-county area's 11 municipalities. The sessions focused on low-income development, because, Barksdale says, "Rich people take care of themselves."

Striving to "create the kind of coast we want 20 years from now," says Leland Speed, executive director of the Mississippi Development Authority, the charrette offered a variety of suggestions: permanent mobile homes featuring front porches and improved finishes; a selection of house plans suited to local climate and culture; pedestrian-oriented commercial districts; downsized big-box retailers; and sketches envisioning integrated, Monte Carlo–like casinos and street life. Gulfport Mayor Brent Warr says, "We will retain our Southern history and culture. But [as for] things that weren't beautiful [in the first place], we'll let them fade into history." The important thing, says Duany, is to create such incentives as pre-permitting that will encourage developers to follow smart growth principles.

The charrette left a number of thorny issues for communities to decide for themselves: how to create high-density streets that allow poor people to get along without cars; how to build storm-resistant buildings without making them unaffordable and inaccessible; and how to accommodate behemoth casinos to the urban fabric of small towns. A summary of the charrette will constitute a major portion of a redevelopment report due on the Mississippi governor's desk by December 31. ***Andrea Oppenheimer Dean***

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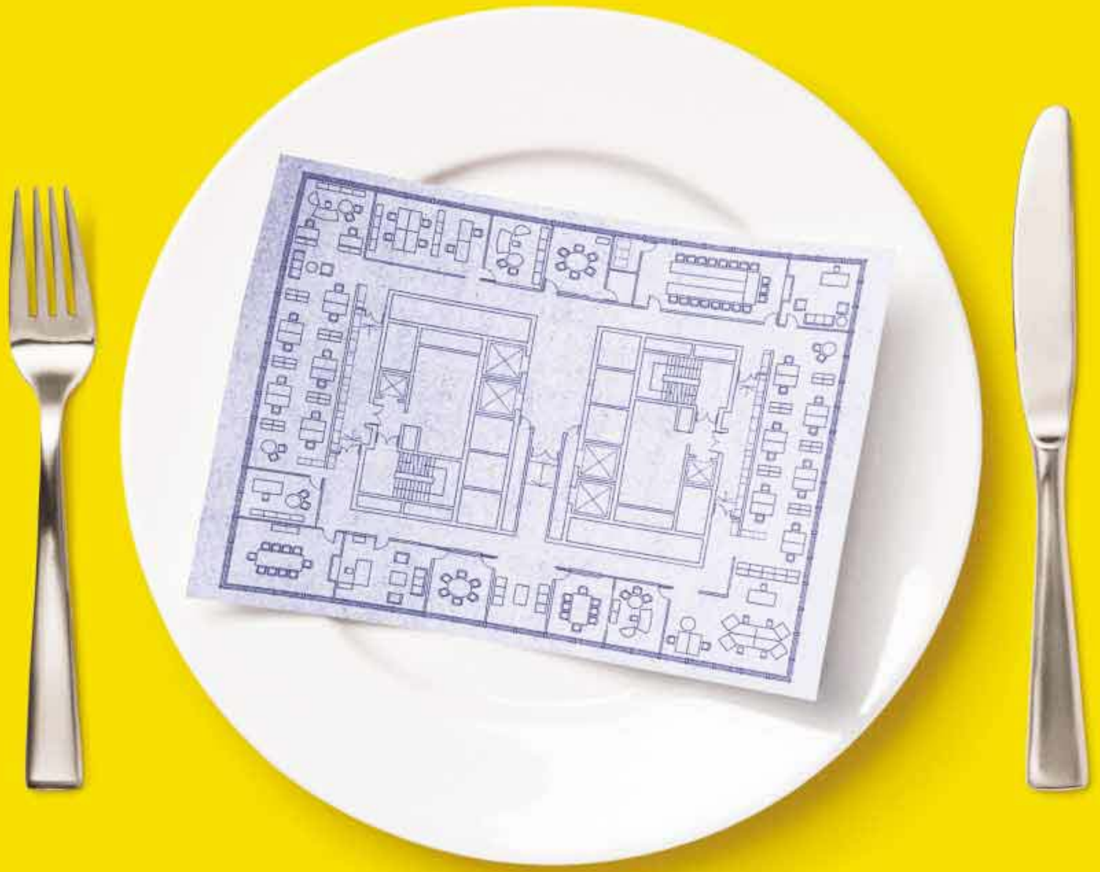

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SPECIAL HURRICANE REPORT

Historic buildings in Mississippi and Louisiana damaged or destroyed

Of the 37,000 structures located in Louisiana's National Register districts, at least two thirds appeared to be affected by Hurricanes Katrina and Rita, according to the National Trust for Historic Preservation. Early figures from the National Trust and Mississippi preservation officials put the losses along that state's coast at about 250 historic structures. Here are just a few of the buildings damaged or destroyed by the hurricanes.

1. The Herman House (also known as the Ralph Wood House), Biloxi (1830s or '40s) Most recently a bed and breakfast, the house was considered the finest piece of architecture in Biloxi when it was built. Hurricane Katrina completely destroyed it.

2. Charnley Guest House, Ocean Springs (1890) Built by Louis Sullivan, both the Charnley house and guest house were severely damaged. The guest house will not be rebuilt, although its remnants will be salvaged.

3. Dantzler House, Biloxi (early 1850s) Considered one of the grandest early houses in Biloxi, it suffered damage from a hurricane in 1855 before being destroyed by Hurricane Katrina.

4. Rayne Memorial Church, New Orleans (1876) Due to Hurricane Katrina, the church suffered a collapsed steeple and a flooded sanctuary. Nonetheless church officials are determined to save the building.

5. West Rigolets Lighthouse, the Rigolets (1855) The lighthouse was located on a bayou that connects Lake Ponchartrain to Lake Borgne and is assumed to have completely washed away. It survived the Civil War but was abandoned in 1945 for an electric lighthouse.

6. Longue Vue, New Orleans (1942) Unlike most houses in New Orleans, Long Vue had a basement, which was flooded with 15 feet of water during the hurricane. Otherwise, the building fared well.

Rita spares historic buildings in Texas

No doubt less destructive than Katrina, Hurricane Rita still did some minor damage to the historic buildings along the Texas coast. According Terry Colley, deputy of the Texas Historical Commission, the hurricane hit Sabine Pass the hardest, leaving up to 10 feet of water in areas. The Plummer-Deslatte House (1898), a pink Victorian-style home, suffered water damage from the storm surge, while the Sabine Pass Battleground Park has remained closed since the hurricane due to damage. In Port Arthur, the Rose Hill Manor (1906) had one broken column; shingles and downed limbs were strewn throughout the yard.

In downtown Beaumont, St. Anthony's Cathedral (1907) collected rain due to its damaged dome, and the Hotel Beaumont (1887) lost its penthouse. Among the relatively unscathed buildings were the Jefferson Theatre (1927), the French Home Trading Post (1845), and the Tyrrell Historical Library (1903). ***Sarah Cox***

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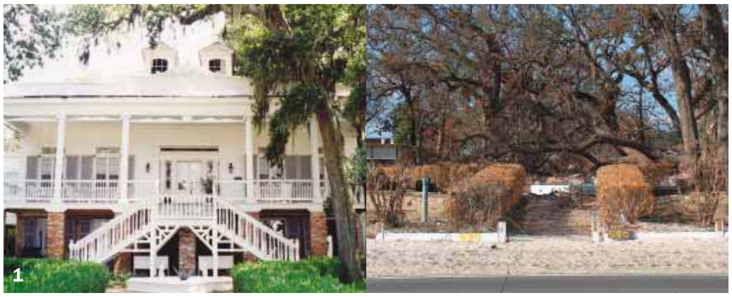
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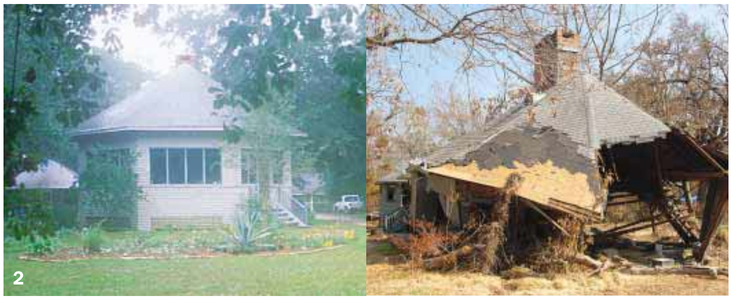
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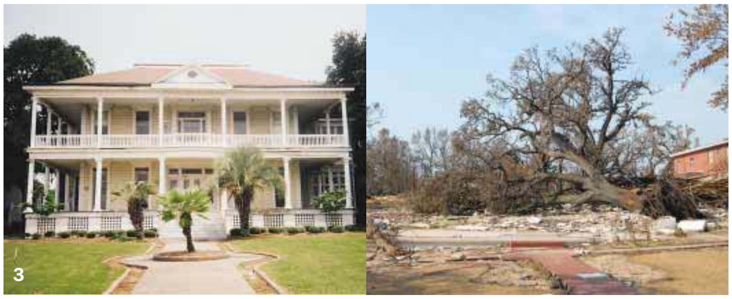
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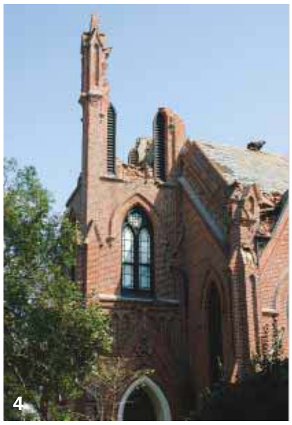
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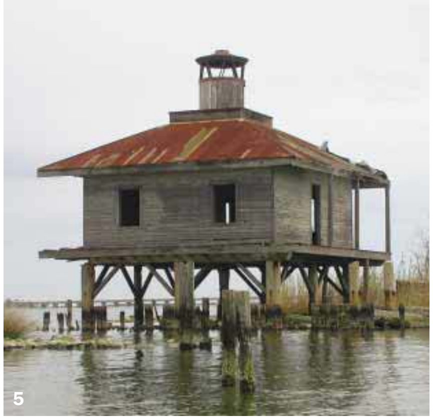
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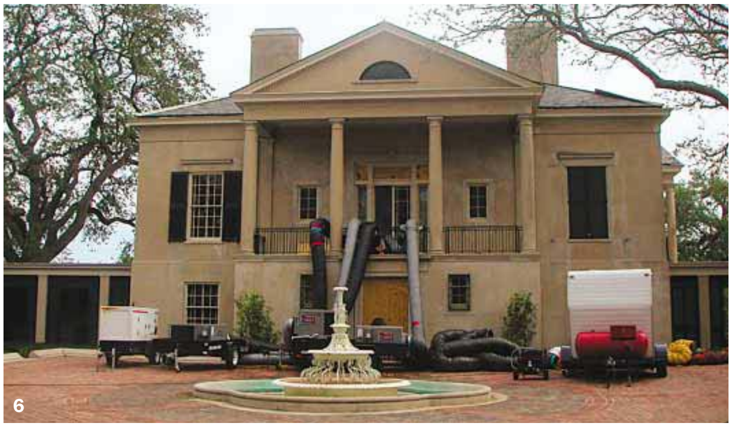
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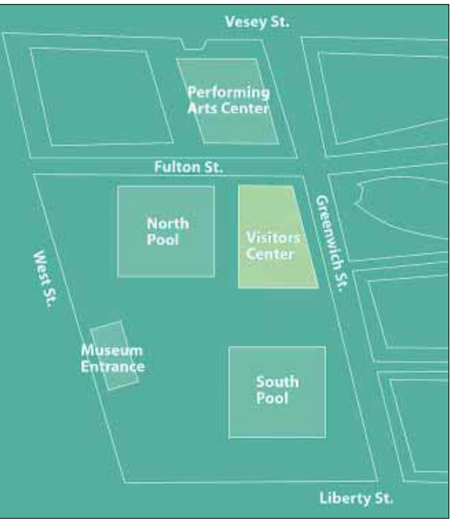
International Freedom Center and Drawing Center both out at Ground Zero

After fighting for their existence over the past few months, the International Freedom Center (IFC) and the Drawing Center at Ground Zero have lost their battles. On September 28, New York Governor George Pataki announced in a statement that, “There remains too much opposition, too much controversy over the programming of the IFC, and we must move forward with our first priority, the creation of an inspiring memorial.” After facing similarly steep criticism, the Drawing Center had left on its own accord prior to the announcement.



The WTC site map now denotes only a visitors center next to the Memorial.

The museums would have been housed in the still-planned-for cultural building by Norwegian firm Snøhetta on the northeast corner of the World Trade Center site. The World Trade Center Memorial Foundation is seeking new cultural tenants for the space, although the site is now referred to as a visitors center on Memorial-related literature, and officials have said that parts of the Memorial’s September 11 museum will be presented there. The Freedom Center’s purpose was to “tell freedom’s story,” according to its mission statement, while the Drawing Center, located in New York’s SoHo neighborhood, is the only non-profit organization dedicated only to drawing. In the past several months, both institutions had been under attack from families and survivors of the World Trade Center attacks, firefighters, policemen, politicians, and others who feared their exhibitions would be critical of U.S. policies, and also felt they would be out of place on what many consider sacred ground. Others were concerned the museums would detract from the impact of the World Trade Center Memorial and museum, located just steps away, designed by architect Michael Arad.

On September 22, the IFC’s director and founder, Tom Bernstein, submitted a new proposal, attempting to convince leaders, particularly New York Governor George Pataki, that the museum would not stir up as much controversy as feared. The proposal touted the museum’s goal of advancing freedom, and named new board members, including former Soviet political prisoner Natan Sharansky. But the effort was to no avail. In his statement, Governor Pataki pledged to move the Freedom Center elsewhere in New York, but shortly after, the IFC said in its own statement, “We do not believe there is a viable alternative place for the IFC at the World Trade Center site. We consider our work, therefore, to have been brought to an end.”

Gretchen Dykstra, president of the World Trade Center Memorial Foundation, which is charged with funding the memorial, as well as the cultural center, appeared solidly behind Governor Pataki, saying “Governor Pataki has provided clear direction that the Memorial quadrant should be devoted to telling the story of September 11.” But John C. Whitehead, chairman of the Lower Manhattan Development Corporation (LMDC) was apparently disappointed with the outcome. “We had hoped that we would be able to reach a resolution that was agreeable to all,” he said. Another LMDC board member and prominent New York philanthropist, Agnes Gund, resigned following the IFC’s departure.

Snøhetta’s cultural complex was designed to minimize its impact, deferring to the World Trade Center Memorial. However, without the IFC or the Drawing Center, the building’s program is left uncertain. Craig Dykers, project architect for the center, confirmed that the newest version of the building will be between 30 and 50 percent smaller than the original design. “We’ve not been asked to change [any materials],” he added.

Frank Gehry’s cultural complex, which will house the Joyce Theater and the Signature Theater, appears to still be moving forward, although no design has been unveiled. *Sam Lubell*

Guggenheim, eyeing expansion, names New York chief

The Solomon R. Guggenheim Foundation is creating a new leadership position with an eye toward continuing its expansion throughout the world. Lisa Dennison, a 27-year veteran of the institution and formerly the museum’s deputy director, has been named director of the Guggenheim Museum in New York. Officials there say that Dennison’s new position will help free up time for Thomas Krens, the foundation’s chief executive and artistic officer, so he can focus on new exhibition projects and museums currently in development.

During Krens’s 17-year tenure at the foundation, he has played a pivotal role in the operation of museums in Bilbao, Las Vegas, Venice, and Berlin. Now, the foundation has hired architects Enrique Norton and Zaha Hadid to do studies for museums in Guadalajara and Singapore, respectively. A Guggenheim museum is part of a large development proposal Norman Foster is designing for Hong Kong. And Richard Gluckman is preparing a feasibility study for part of a renovation project for the foundation’s new Russian partner, the Hermitage Museum. ***Alex Ulam***

Ito wins top British architecture prize

Toyo Ito.

Japanese architect Toyo Ito has won the 2006 Royal Gold Medal for Architecture. He will receive the medal at a February 15, 2006, ceremony held at the Royal Institute of British Architects (RIBA). The annual award is given in recognition of a lifetime’s worth of work, and the recipient is personally approved by the Queen. It is bestowed upon a person or group of people whose influence on architecture has had an international effect.

Ito’s recent projects include the Sendai Médiathèque, Sendai, Japan (2001), the Brugge Pavilion in Belgium (2002), and London’s Serpentine Gallery Pavilion (2002). Ito’s Modernist architecture draws its inspiration from nature, using organic geometries and joyful spaces filled with life.

“Toyo Ito has been an inspiration for generations of architects worldwide since his work started to receive international acclaim in the 1970s,” said Jack Pringle, RIBA president, in a written statement. “For 30 years, he has been a leading figure in architecture, and I am delighted that he has accepted the Royal Gold Medal.” *Tony Illia*

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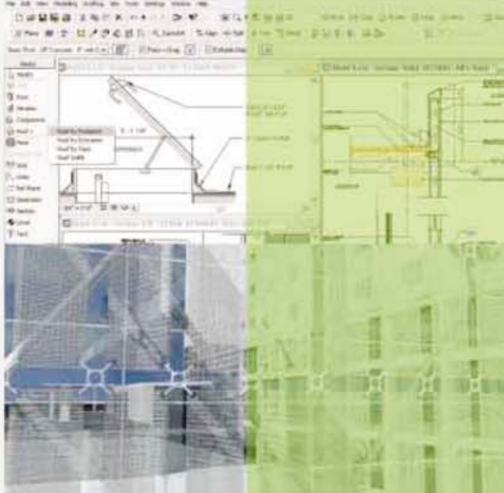

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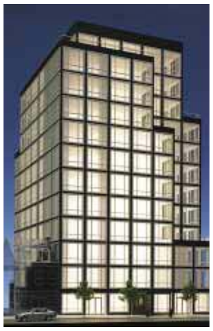
Philip Johnson's final project under way

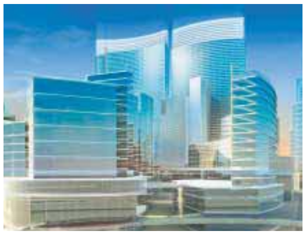


Less than a year after the death of Modernist icon Philip Johnson, his final residential project is now rising in New York City. Ground was broken in August for the 12-story Urban Glass House, a condominium project designed by Johnson and his partner Alan Ritchie of Philip Johnson/Alan Ritchie Architects, along with Annabelle Selldorf of Selldorf Architects, and SLCE Architects. The project is located at 330 Spring Street in Lower Manhattan, a block away from the Hudson River.

The project is based on Johnson's 1949 Glass House in New Canaan, Connecticut, featuring a simple, rectilinear formation of glass and steel. The urban version will be larger, and much more luxurious, sold as 40 airy, upscale condos, ranging from 1,400 to 4,300 square feet.

Selldorf, who took over the interior design from Johnson last year, heeded his philosophy of "clarity of space" and "plentiful light and air." But, Selldorf explains, "Whereas Modernism has been criticized for its rigidity, we've created homes where we've made comfort a priority." Floors will be French white oak in herringbone patterns, as in the original Glass House. Some surfaces will feature black Absolut granite or green Indian limestone. The project is slated for completion in late summer 2006, in time to mark the 100th anniversary of Johnson's birth. *Ilan Kayatsky*

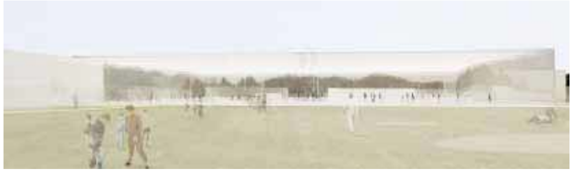
Big names head to Vegas's largest-ever private project



MGM Mirage announced last month that it has recruited a who's-who list of architects for its mammoth Project CityCenter development on the Las Vegas Strip. The 18-million-square-foot, $5 billion urban-style complex of hotels, shops, casinos, and residences will be the largest privately financed construction project in U.S. history. Ehrenkrantz, Eckstut & Kuhn is the master-plan architect, and Gensler is the executive architect.

The development centers on a 4,000-room hotel-casino designed by Cesar Pelli, FAIA, which includes two 60-story crescent-shaped glass towers. Rafael Viñoly, FAIA, has created a curved 400-foot, 1,000-unit hotel-condo building, while Vancouver-based James KM Cheng is designing a 100-unit residential tower. Kohn Pedersen Fox Associates is designing the exterior of a 400-room Mandarin hotel with interiors by Adam Tihany. Norman Foster is responsible for another 400-room hotel.

Although the project is only halfway through a 20-month design cycle, it is anticipated to make its debut in November of 2009. *Tony Illia*



Louvre unveils annex design

Kazuyo Sejima and Ryue Nishizawa and their Tokyo-based architecture firm Sanaa have been selected to design the Louvre's first satellite museum, with museum-design specialists Celia Imrey and Tim Culbert. The museum will be located in the coal mining town of Lens, in northern France.

Long-time French minister of culture Jack Lang referred to the understated winning design as "an anti-Guggenheim," and noted that Sejima will be the first woman to construct a major French monument.

The $140 million project, which includes a park designed by landscape architect Catherine Mosbach, will sprawl over a 153-acre site that was formerly a mine. Nine one-to-three story buildings will be set into the sloping terrain. Polished steel facades will mirror the landscape, while light will be filtered through glass roofs. Although the plan of the palatial Paris Louvre is symmetrical and ordered, the Lens annex is fluid and decentralized. Along with administration and temporary exhibition space, about 500 artworks from the Louvre's storage will provide a semipermanent collection, rotated every three years. The museum is set to open in 2009. *Claire Downey*

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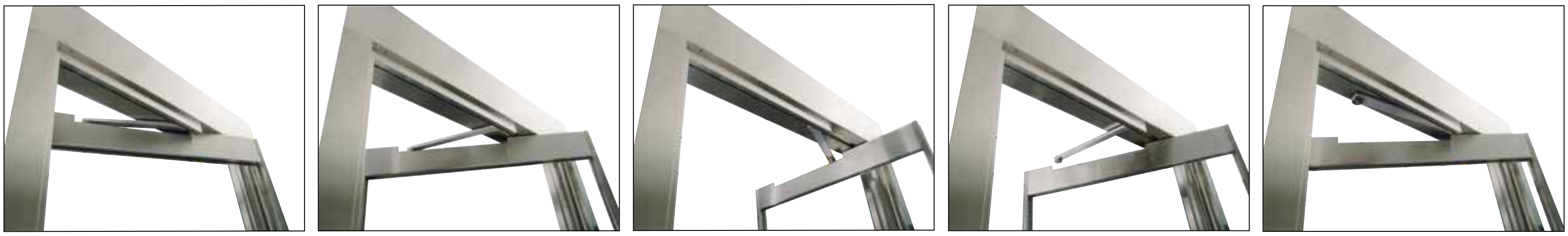

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Building boom in hotel-condo combinations

Toronto is awaiting KPF's Ritz Hotel and condos (left), Zeidler Partnership's Trump Tower (above), and Architect's Alliance's Four Season's (below).

IMAGES: COURTESY KPF (LEFT) ZEIDLER PARTNERSHIP (TOP); ARCHITECT'S ALLIANCE (BOTTOM)

Is the economy troubled? Apparently the developers of luxury hotel and condo towers think not. The lucrative combination development type is nothing new, but it is seeing a renaissance in major North American cities. Wealthy tenants (by most accounts getting richer despite the economy), appear intrigued by the opulence and convenience of hotel living, while high real estate prices are prompting condo and hotel developers to team up for maximum profit. Donald Trump is prominent among the developers leading the action, and the Four Seasons and Ritz-Carlton stand out among hoteliers who are getting in on the game. Elegant glass-and-steel towers appear to be in demand for the well-heeled, fairly conservative clientele, although some splashy exceptions persist.

In Toronto, Four Seasons, Ritz-Carlton, and Trump each have recently announced plans for hotel-and-condo towers. The Four Seasons, which has its headquarters here, presented plans in July for a new 55-story hotel just a few blocks away from its existing Toronto location. Designed by the Architect's Alliance, the $325 million project will include a 265-room hotel with up to 150 condo residences. Trump is planning a 70-story tower with 109 residential units and 265 hotel units here, designed by Zeidler Partnership Architects. Construction will start within a few months, with occupancy in early 2009. The Ritz-Carlton's addition to the city will be the 53-story Ritz-Carlton Hotel & Residences, with 267 rooms and 135 condo residences. The building is being designed in a collaboration between Kohn Pedersen Fox (KPF) Associates Architects and Planners and Toronto's Page + Steeles Architects Planners, and will also open in 2009.

Four days before Hurricane Katrina flooded New Orleans, Donald Trump joined a team of developers to plan a $200 million, 70-story hotel-and-condo tower that would have been the tallest building in that city. Trump told a San Francisco ABC reporter in early September, "We were thinking about building something [in New Orleans], and we still are." Trump is also developing hotel-and-condo towers in Chicago (where Santiago Calatrava's twisting hotel/condo is lately stealing headlines), Phoenix, and Las Vegas. Trump's 64-story building in Las Vegas by Bergman, Walls & Associates will open in 2006, but will be bested by the Ivana Las Vegas. Trump's ex-wife Ivana unveiled plans for the 80-story building this summer. It will open in 2008. Although lacking a hotel, Ivana Las Vegas is in the Strip's hotel zone and is expected to gross more than $1 billion in condo sales.

Ritz-Carlton is also planning The Residences at Ritz-Carlton, a $250 million, 44-story tower directly across from Philadelphia City Hall. In San Francisco, SOM's Craig Hartman has designed a new 42-story St. Regis hotel, scheduled to open in 2007, with 102 condo units and 260 hotel rooms. *John E. Czarnecki, Assoc. AIA*

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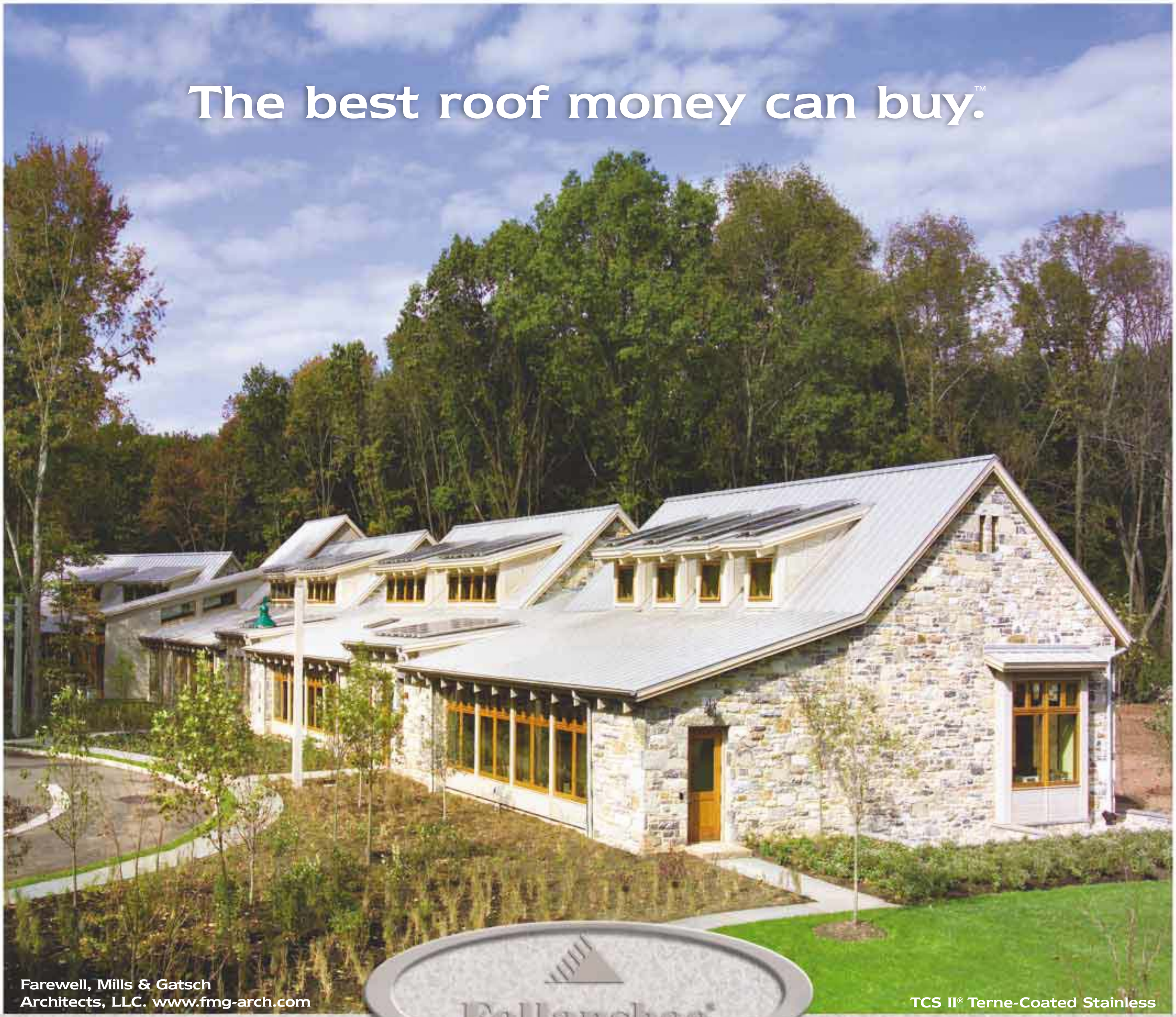
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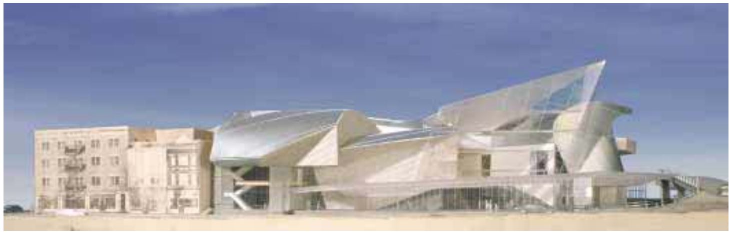

IMAGE: COURTESY RANDALL STOUT ARCHITECTS

Stout designing long-awaited Art Museum of Western Virginia in Roanoke

Bold, brawny, and enfolded in voluptuous stainless-steel curves, the long-awaited new Art Museum of Western Virginia is finally making its way to Roanoke, Virginia. After more than five years of planning, the 75,000-square-foot museum building, designed by Los Angeles–based architect Randall Stout (architect of the Hunter Museum of Art addition in Tennessee [page 122]), will break ground this fall and will more than double the gallery space of the museum's existing facility.

As the city's first freestanding art museum, it offers more than 16,000 square feet of gallery space for both temporary exhibitions and the museum's permanent collection of 19th- and 20th-century art. It also includes a multimedia educational center and a three-story glass-enclosed atrium that protrudes from the main body of the structure like a rocky mountain outcrop. The museum's design, a composition of angular ridges and cascading slopes, mimics the contours of its Blue Ridge Mountain backdrop, and draws on its surroundings by using local building materials, such as the "Hokie" stone, native to western Virginia.

Stout was hired in 2002 for the project, which is projected to cost $46 million. Its arrival in downtown Roanoke marks a step forward in the economic revival of this former railroad town. Museum officials plan to open the new facility in fall 2007. *Christina Rogers*

Busy in the heartland, Chipperfield designing addition to Saint Louis Art Museum

British architect David Chipperfield is quickly becoming a household name in heartland America. His Figge Art Museum opened in August in Davenport, Iowa (page 116), and his office is finishing up the Public Library of Des Moines.

Topping all this off is a commission Chipperfield just received to add 120,000 square feet to the Saint Louis Art Museum, designed by Cass Gilbert for the World's Fair in 1904. The museum's selection committee, according to Saint Louis museum director Brent R. Benjamin, wanted "a building of our time" that would fit in with the Beaux-Arts architecture of the museum and its parklike setting. Chipperfield's quietly elegant addition to the Neoclassical-style Museum of Modern Literature in Marbach, Germany, opening this month, reportedly helped give him an edge in a list of more than 100 architects.

What explains the appeal of the Briton in middle America? Benjamin thinks the Chipperfield cluster is a coincidence. However, director of the Des Moines Public Library, Kay Runge, says the architect responds to the "Midwest mindset." She notes, "Chipperfield gives you individual buildings, not just in the mold, but with a down-to-earth elegance. And he listens to the client." *Suzanne Stephens*

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News Briefs

Grand and Petit Palais completing renovations in Paris Paris's Beaux Arts–style Musée du Grand Palais, which closed in 1993 for renovation, reopened in September. The extended closure of the museum, a showcase for artworks and historical exhibitions, was largely the result of bureaucratic wrangling over the $122 million budget. Although Paris-based architect Alain Perrot's intricate work on the foundations and metal structure of the 145,000-square-foot hall is complete, the facade restoration will take another two years. The smaller Musée du Petit Palais, closed for four years, is reopening in December. Philippe Chaix, of Chaix & Morel, the Paris-based firm in charge of the $87 million renovation, says they worked on "restoring the clarity and unity of the original architecture." The museum's collection of artifacts and artworks will be displayed in larger, relit halls. *Robert Such*

Bright, elegant Grand Palais renovation.

Scottish Parliament takes Stirling Prize The Scottish Parliament building, a fanciful deconstructed design by the late Enric Miralles [RECORD, February 2005, page 98], was awarded the 10th RIBA Stirling Prize on October 15. Miralles's widow, Benedetta Tagliabue, represented their Barcelona-based firm EMBT. The building cost $757 million and was completed in 2004 by a joint venture with RMJM. *Lucy Bullivant*

Rogers designing Javits extension British architect Richard Rogers has been chosen to design a much-needed expansion to New York City's Jacob Javits Convention Center. The 790,000-square-foot building, originally designed by I.M. Pei, will increase to 1.5 million square feet. The expansion is being designed with New York–based FXFowle Architects (formerly Fox & Fowle) and A. Epstein & Son. No designs have been released yet. The project is expected to cost about $1.4 billion. *S.L.*

Holl designs hall for Pratt Steven Holl Architects' new Higgins Hall center section opened at Brooklyn's Pratt Institute in September. Sandwiched between two landmarked brick buildings, the $10.5 million insertion connects the two wings of the hall, which house Pratt's architecture school. The new, 22,500-square-foot section is supported by precast-concrete beams and is enveloped in interlocking structural channel glass backed with translucent white insulation. It joins two buildings whose floor heights are mismatched. Clear windows intentionally expose this so-called "dissonant zone," showing the ramps that connect the misaligned floor plates. *D.L.*

Higgins Hall's center section, by Holl.

Gehry working again in France Frank Gehry is working on a 6,337-square-foot center for contemporary art in Paris for LVMH chairman Bernard Arnault. The site is the Jardin d'Acclimatation, a children's park on the western edge of the city. The 1960s Musée National des Arts et Traditions Populaires, also found within the park, will close its doors this fall and be demolished, leaving parkland available for the project. *Claire Downey*

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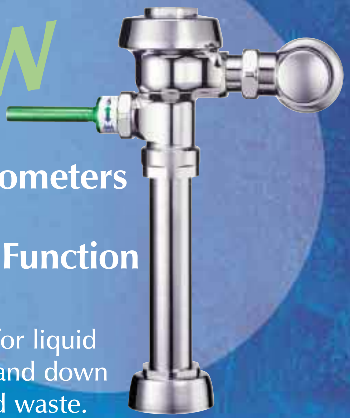

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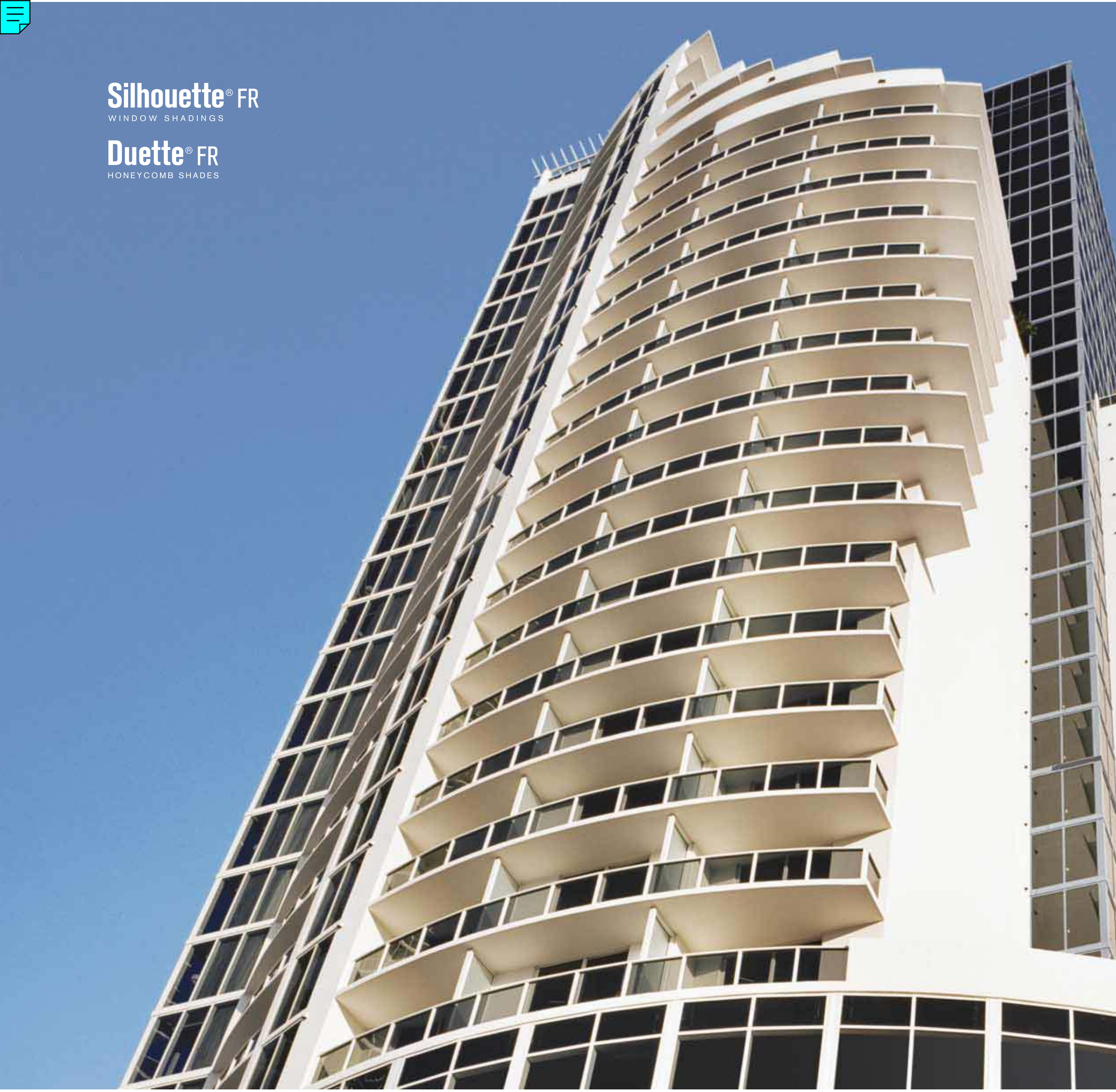
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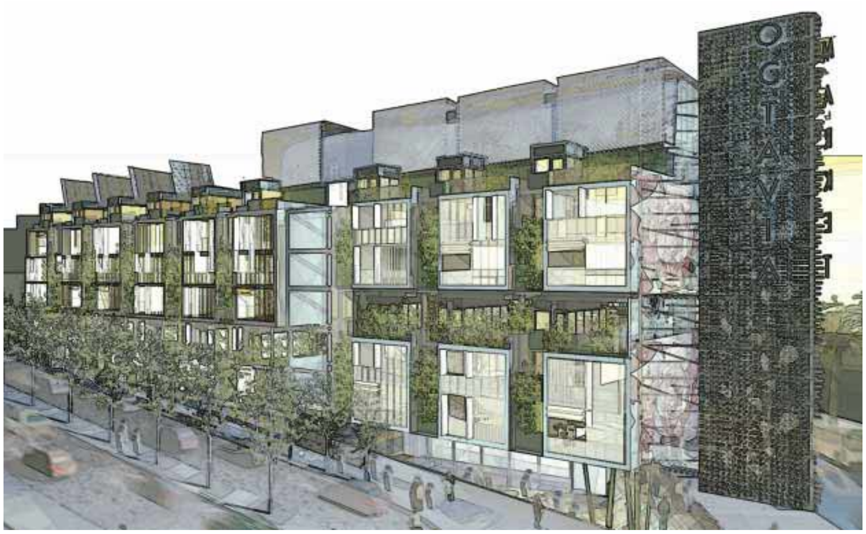
archrecord2

This month, **archrecord2** invites you to learn more about the value of teamwork. In **Design**, we talk to the founder of ellipsis a+d, who decided to go out on his own and, in the process, found the merit in cooperative architectural efforts. In **Work**, we catch up with a group of students who used their summer to design and build an ecological, low-cost modular housing system. For more on both stories, go to archrecord.com/archrecord2.

Design

A predilection for collaboration

Judging from Gregory Klosowski's lineage—his father was a machinist; his grandfather, a mason—it is not much of a stretch to imagine him leaning toward a career within a craft-oriented field. During his teenage years, Klosowski spent his summers gaining experience in construction and roofing. The native Midwesterner honed these skills and used them as an entrée into the study of architecture at Ball State University in Muncie, Indiana.



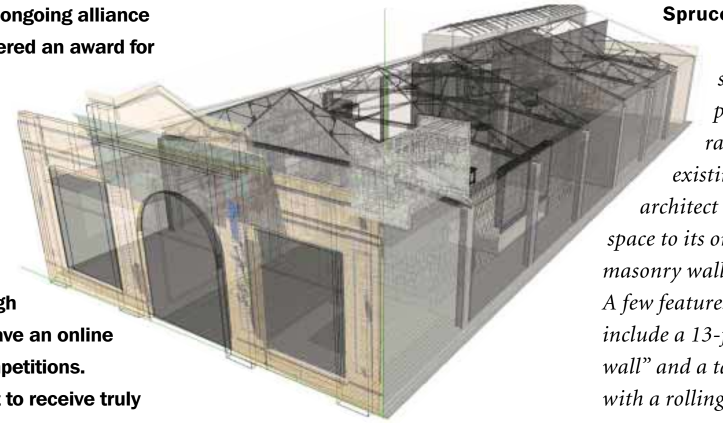
San Francisco Prize 2005 Competition Entry
Coil Collaborative created this multifamily housing plan as one possibility for the 26 buildable sites on Octavia Boulevard. Currently, the architects are working with another possible collaborator as well as developers to try to turn this rendering into a reality.

After graduation, Klosowski moved to California for the temperate climate and abundance of work available in the mid-1990s' booming architecture market. Several years of working at firms provided what Klosowski describes as "a good mix of a lot of different architecture projects." In 2001, the architect decided to go solo and formed the Oakland-based ellipsis a+d.

Klosowski believes that an article in ARCHITECTURAL RECORD helped shape his collaborative work style. In it, the author explained how success in architecture can be achieved either by being a large firm that is able to be flexible with project types or a small practice that is willing to form collaborations as needed. Klosowski gladly subscribes to the latter solution.

One of his collaborations, called Coil Collaborative, is an ongoing alliance with architect Veronica Hinkley Reck. Most recently, they garnered an award for their 2005 San Francisco Prize Competition entry. In an interdisciplinary collaboration called Elevation 77, Klosowski has joined forces with a developer to work on plans for a mixed-use development in Oakland.

The architect believes his penchant for collaborations began his senior year at Ball State. "It just snaked into what I was doing," explains Klosowski. He and a classmate, Paul Benigno, often critiqued each other's projects. Even now, though geographically separated and with distinct careers, the pair have an online dialogue to assess projects and have even jointly entered competitions. Klosowski is happy this relationship has endured: "It's difficult to receive truly



Spruce, San Francisco
Originally a smaller-scale program, the plan is now a restaurant within the entire existing structure. The architect intends to strip the space to its original steel trusses, masonry walls, and large skylight. A few features of the space will include a 13-foot-tall "monument wall" and a tall wine storage case with a rolling ladder.

RENDERINGS AND PHOTOGRAPHY: COURTESY ELLIPSIS A+D

critical evaluations from your peers."

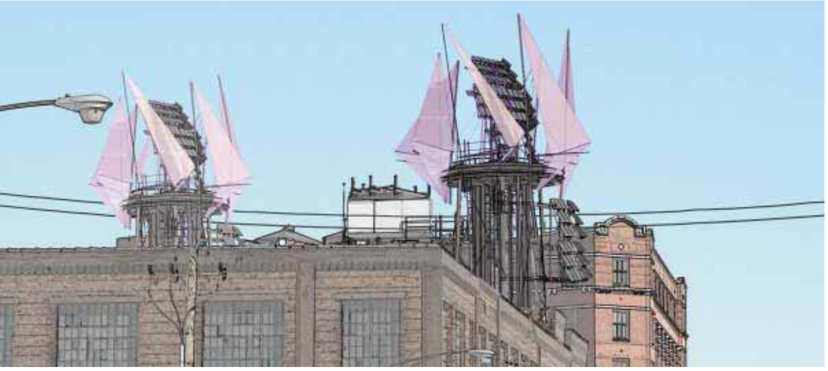
Klosowski readily admits that not all architectural alliances run smoothly. "Essentially, you have to get comfortable with one another to make things fruitful," he explains. "It's easy to make design the secondary concern. You can get sidetracked by concentrating on not offending one another rather than focusing on the evolving design." But he points out that while it may be difficult to temper signature styles within one project, it is the differing design aesthetics that make the end result more interesting.

Ellipsis a+d's upcoming projects find Klosowski holding true to the tenet of collaboration as well as working solo on residential and commercial projects. And not to veer too far from his construction roots, Klosowski finds the time to utilize the small shop in his garage for hands-on projects for his own residence or for grateful friends. ***Randi Greenberg***

For more photos and assorted projects by ellipsis a+d, go to archrecord.com/archrecord2

MVR Residence, Orinda, Calif. *This project is a collaboration with Klosowski's ex-employer, Ed Detmer. The program for this residence minimizes massing and takes into account the plot's topography.*

Marina Residence staircase San Francisco, 2003 *The architect was in charge of the redesign and detailing of the stairwell, including the four-story, stainless-steel-mesh screen.*



Chicago Prize 2005 entry *This year's competition seeks ways to reuse and preserve the industrial water tanks of Chicago. Klosowski's entry repurposes the rooftop tanks as energy collectors.*

Work

Design, Build, and Repeat

While other architecture students were sleeping off the stress and caffeine-induced stupor of their final charrettes early last spring, the ecoMOD studio at the University of Virginia was just gearing up for construction of a prefabricated, ecological, and affordable home of their own design. The ambitious students' design, the OUTin House—named for its mix of indoor and outdoor spaces—required a multidisciplinary approach to deal with budget constraints, client needs, and the demands of real-life construction.

The ecoMOD studio's central issue is ecology. The design incorporates cisterns to collect up to 3,400 gallons of rainwater made potable for use in the residence. A sleeping porch as well as the home's many windows, oriented to optimize passive heating and lighting, add to the blurring of indoor and outdoor areas.

As the construction wraps up this month, Assistant Professor John Quale is already planning construction of future homes. Currently, he is teaching "Evaluating ecoMOD," a course that monitors the home's success. Quale and his students are looking at the residence's thermal environment and energy use, as well as analyzing the life cycle of the building and landscape. They will also conduct a postoccupancy evaluation, and interview owners, neighbors, and EcoMOD's client, the Piedmont Housing Alliance. The Environmental Protection Agency selected the UVA team to compete for the P3 Award, a student design competition for sustainable design; a win would mean additional funding for two more homes.

The goal of subsequent studios, currently scheduled for the fall semesters of 2006 and 2007, will be to bring good design to lower-income housing. Students in these studios will create original designs using the information gathered from the OUTin residence to inform their decisions. Quale would eventually like to see a builder adopt the designs for more widespread use, but for now change comes one structural insulated panel at a time. ***Sarah Cox***

For more images of this project as well as information on ecoMOD studio, go to archrecord.construction.com/archrecord2/

A model of ecoMOD studio's OUTin House (left) and its construction in an empty hangar (right).

PHOTOGRAPHY: COURTESY ECOMOD STUDIO

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A few questions to ponder in the wake of a hurricane

Critique

By Robert Campbell, FAIA

Where were the trains?

Did every architect have the same reaction I did, looking at all those aerial photos of jammed highways and stalled cars (many of them useless, because gas stations were out of gas) desperately trying to flee New Orleans? Reading all those news stories about whether FEMA had ordered the necessary hundreds—or was it thousands—of buses?

You'd think no one had ever invented a means of human transport that didn't rely on asphalt. I don't recall a single news report during the Gulf Coast hurricane crisis that so much as mentioned railroad trains.

Katrina teaches many lessons. One is that we need redundancy in transit if we really want to be able to evacuate cities in the face of a natural or human-made disaster. Trains carry more people with less cost and greater safety than any other vehicles. We all know further reasons for liking them—low pollution, for one, and a tendency to concentrate populations—but Katrina reminded us of a more desperate obligation. We all bear responsibility for those people who suffered on the highways. Passenger rail declined, in large part, because our government was simultaneously funding highways and taxing railroads.

It's too early to write coherently about what to do about New Orleans. It's a time for brainstorming, not for pushing final solutions. All anyone can do is suggest a series of things to think about. Rail is one of them, but here are some others.

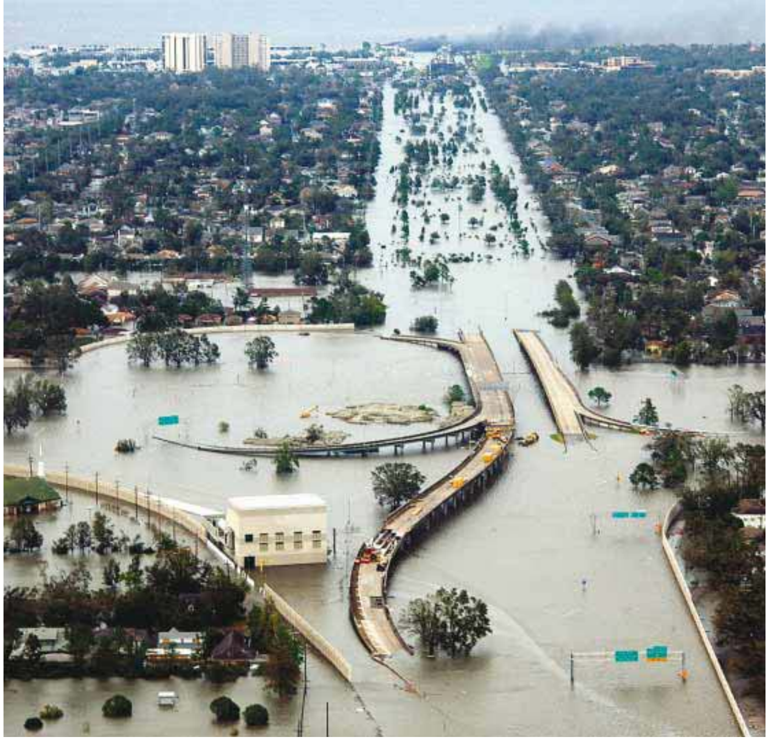
Who's the client?

Someone has to be in charge. Given that hurricanes are intensified as they pass over the warm-and-getting-warmer water of the Gulf, it might make sense to create a Gulf Coast Authority (GCA). The GCA would coordinate reconstruction and planning from Texas to Alabama. Several friends suggest the Tennessee Valley Authority (TVA) as a model. TVA worked wonders, but I doubt our Republican senators will buy such a socialistic concept. Maybe some form of state-enabled but federally funded authority could be created. Whatever is done, the process must be democratic and transparent, with everyone present at the table. At this writing, there's no evidence that any such agency is being considered. The papers say the federal dollars are being allocated largely by lobbyists.

The happiest outcome would be this: The GCA gets created, it does a fabulous job, and Americans at last wake up to the fact that regional planning is a good idea.

As I write, the Congress for New Urbanism is about to descend in large numbers on the coast of Mississippi, working closely with the governor and other officials in a series of charrettes to develop a plan. That's great. The winds in Mississippi—where even the foundations of houses were sometimes ripped out—were very different from the floods of New Orleans. But a Mississippi-style storm could, someday, hit New Orleans. The coast should be planned as a whole.

Should we seize the day to "make big plans, aim high in hope and work," in Daniel Burnham's famous phrase? A recent Supreme Court decision, on eminent domain, makes it easier for government to assemble city land for urban-design initiatives. But the history of such efforts is spotty at best. We learn from the fate of Sir Christopher Wren's plan for London, after the Great Fire, and from many other examples, that big post-disaster ideas are usually defeated by people's tenacious grip on the old street and property lines. There will be pressure to "do it quick" in New Orleans, to take land and turn it over to big developers. If that does turn out to be achievable, it will probably be a disaster. The city should grow back more slowly and thoughtfully.



A flooded highway in New Orleans reveals the danger of relying too heavily on one mode of transportation and not having alternatives when disaster strikes.

PHOTOGRAPHY: © COURTESY FEDERAL EMERGENCY MANAGEMENT AGENCY

Off-limits

One big move, though, is needed. Certain areas of the city should be

Contributing editor Robert Campbell is the Pulitzer Prize–winning architecture critic for The Boston Globe.

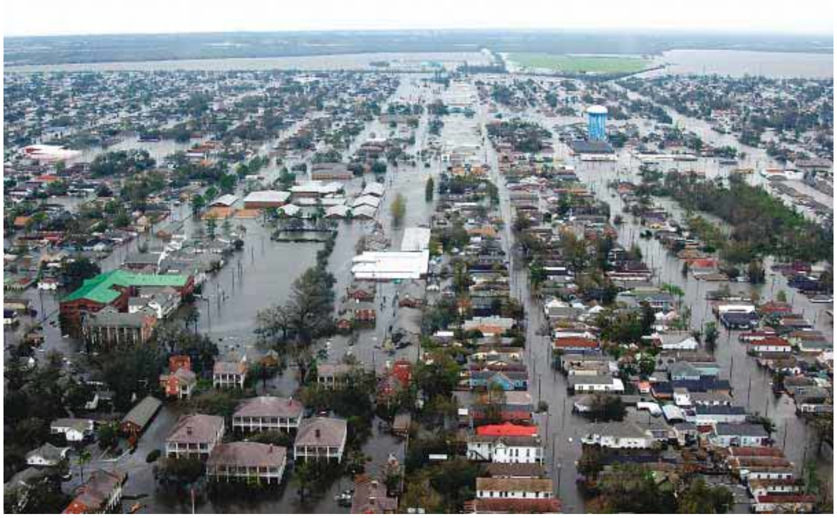
declared too risky to be habitable. People must not again be put in harm's way. Toronto acted after Hurricane Hazel, Canada's worst, in 1954. Low-lying areas were redefined as no-build zones. Residents were moved and owners were compensated. The result, today, is a web of public parks in Toronto's ravines.

The cost of doing nothing

The $3 billion or so that Louisiana requested from the feds last year, in order to beef up the levees, was denied. Americans don't believe in major public projects, unless you count the military. Meanwhile, China plans to spend $24 billion on the Three Gorges Dam. Hong Kong creates a new island in the ocean, builds an airport on it, and connects it to the city with undersea and surface transit. The Netherlands protects an entire nation which, like tiny New Orleans, is below sea level. Having failed to spend $3 billion to prevent a problem, we will now, of course, spend many times that much to correct it.

The Army Corps of Engineers created much of the problem, by channelizing the Mississippi. As they narrowed the river, it naturally grew higher and faster. And it stopped depositing silt on the land around it, which then began to compress and sink. All that is old news now. But unless we're ready to abandon the great port at the mouth of our greatest river, we've got to rely on engineering to fix what engineering broke.

Levees can be higher and stronger, as in the Netherlands. Parts of the city can be filled, raising the grade up to the water level of the lake and river. (It isn't so hard; almost 80 percent of my own city of Boston is filled land, most of it created by human shovelers.) Or the streets could be raised 8 feet or so, and the houses coded to be built on high basements so as to open onto them (not so hard either; it was done in London's Belgravia 200 years ago). The power of a future tidal surge can be weakened by restoring the bayous, wetlands, and barrier islands downstream from the city.


Some neighborhoods in harm's way may have to be zoned off-limits for future building.

A tattered social contract

New Orleans was broken before the storm. It was a dysfunctional city. The economy was dismal, environmental systems were a mess, social

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divisions were acute, and as we now know, the infrastructure was in terrible repair. Today the social contract is so weakened that a majority of low-income people in New Orleans, it is reported, believe the levees were deliberately opened in order to drive them out of the city. Just patching everything back to "normal" would be a dreadful failure.

My Gulf Coast Authority should look decades into the future and imagine what New Orleans could become, socially and economically as well as environmentally, then figure out how to get there.

Schools of architecture are rushing to New Orleans. As I write, studios are being hastily reorganized, to take advantage of the gift of such an engrossing design problem. "They see it as a game. They're racing to be where they don't know anything," remarked a California friend. Vultures? Well, maybe not. But there is something a little bit ghoulish about it.

The city will have to rebuild its frayed social contract, as well as its housing.

Barrier Islands National Park. It's just a dream, okay? But the ghastly hurricane in Galveston in 1900, shortly before Theodore Roosevelt's conservation-minded presidency, should have suggested to our leaders that every barrier island from (at least) New Jersey to Texas will, sooner or later, be devastated by a hurricane. Dwellings should be forbidden on these thin spits of land, most of which are bloated sandbars. A fantastic recreational opportunity was lost.

People mover

Repopulate St. Louis? Just up river is a major city that's been hollowed out by migration to the suburbs. Could the many former New Orleans residents who don't wish to go home be relocated, somehow, to St. Louis? I have no idea what the incentives would be. One thinks of New York, though, where the city would wither if it weren't being revitalized by an endless stream of ambitious immigrants.

Cracking the code

Oh yes, architecture. Whatever can be saved, of course, should be saved. The residential architecture of the city was well adapted to local climate and lifestyles, as well as to the typical long, narrow lots that were an inheritance from the French. The vernacular was charming, and the problem is to maintain its charm, its fine-grain urbanism, and its loose, improvisatory feeling without (a) imposing a rigid design code that would force a literal aping of the past, or (b) letting laissez-faire run amok.

Can anyone create design guidelines that will foster contemporary architecture that is as lively, humane, inventive, and appropriate as that of the past? That would be a first. ■

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Modernism still appears young and vigorous at a New York City show

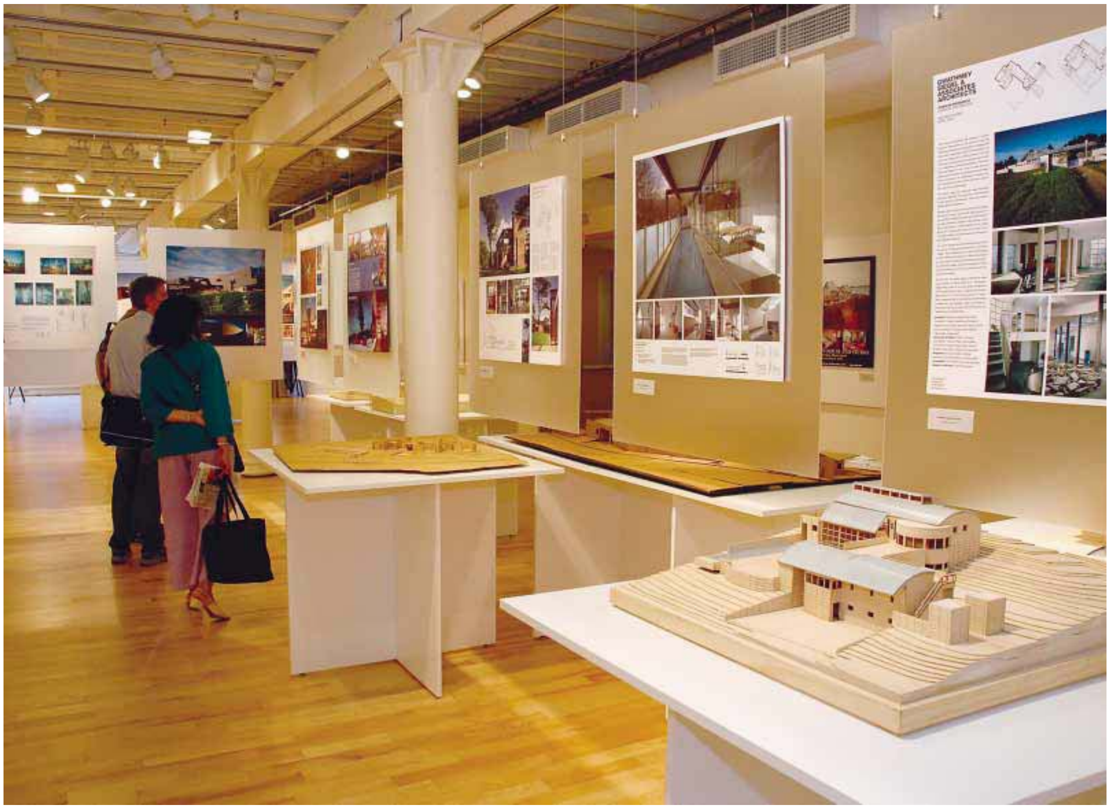
Exhibitions

Forever Modern. *Curated by William Menking. At Pratt Manhattan Gallery, New York City, August 11–September 16.*

Forever Modern, the title of a recent exhibition at Pratt Institute's Manhattan Gallery, has the same ring of exuberant impossibility as "forever young" or "forever dewy and naturally blonde." Some things just can't go on indefinitely—especially if they have the fresh and youthful glow we associate with, well, being modern. This playfully ironic twist was not wasted on the show, which celebrated 50 years of the Record Houses section of ARCHITECTURAL RECORD.

A half-century ago, when we launched Record Houses, its explicit mission was to show that regular people could actually live in Modernist houses—and the architecture could even enhance their lifestyle. To make this point, the inaugural issue, mid-May 1956, opened with Ulrich Franzen's own home in Rye, New York, portrayed not only by architectural photographer Ezra Stoller, but also by *LIFE* magazine photographer Elliot Erwitt, whose shoot focused on Franzen's young family, casually frolicking, dining, cooking, entertaining, and relaxing in their modestly priced yet cutting-edge Modern home.

Over the next five decades, many other influential and iconic houses appeared in these pages. This year, we decided to look back at selected projects to see what had really happened once our camera crews left and daily life took over.



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50 Years of Record Houses

FOREVER MODERN
50 Years of Record Houses

Tall, loftlike windows (near left) bring daylight into the gallery (above). The Blumlein exhibition design, which included wall texts (far right), transformed a large group of foam-core boards into a clean-lined and easy-to-view installation that introduced uniform, visually floating, framelike acrylic mats for the presentation panels, and matching podiums for the models (above).

PHOTOGRAPHY: © EDUARD HUEBER/ARCHPHOTO, EXCEPT AS NOTED; CLAUDIA CASTRO/BLUMLEIN ASSOCIATES (TOP AND BOTTOM RIGHT)

So we launched our celebration of “50 Years of Record Houses” with 12 months of endpapers—the last page of the magazine—each of which revisited one key project.

As we discovered, the buildings had encountered markedly different fates. Certain houses appeared dated, others had slipped into obscurity, some had been demolished or transformed, while still others actually retained a refreshingly modern zing.

Concurrent with the endpapers, we mounted a traveling exhibition, which eventually took the name *Forever Modern*. Presented by ARCHITECTURAL RECORD and Pratt Institute, the show—part of the school’s annual President’s Exhibition Series—displayed the work of 67 architects through drawings, photos, and models, plus houses by 33 additional architects through a slide presentation. Pratt dean of architecture Thomas Hanrahan and curator William Menking worked with RECORD’s exhibition directors Clifford Pearson and Suzanne Stephens, along with Gregory Hafkin, in putting together the retrospective, with exhibition design by Blumlein Associates.

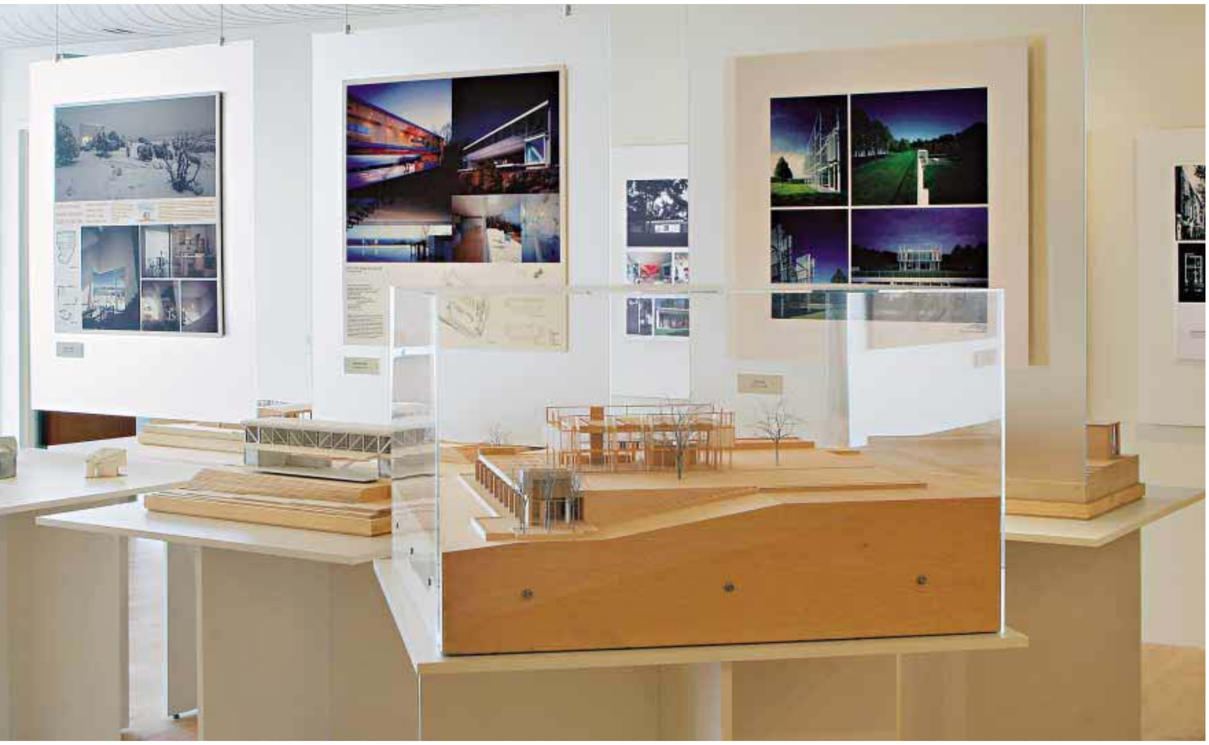
The show was especially suited to this Pratt series since a cadre of important architects, previously featured in Record Houses, had either studied or taught at the school. Hanrahan and Menking enriched the presentation three-dimensionally by enlisting students to craft wood models of selected houses, and by soliciting architects to supply already existing maquettes.

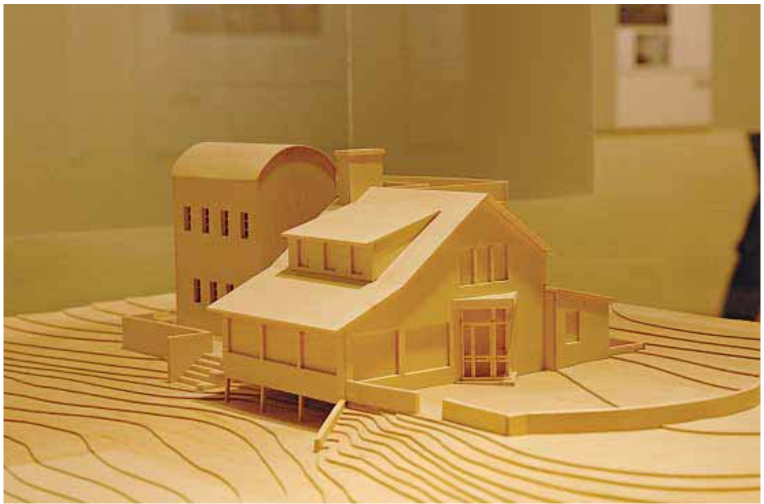
The Blumlein exhibition design transformed a large group of foam-core boards, culled from an assortment of architects, into a clean-lined and easy-to-view installation that included uniform, visually floating, framelike acrylic mats for the presentation panels, and matching podiums for the models.

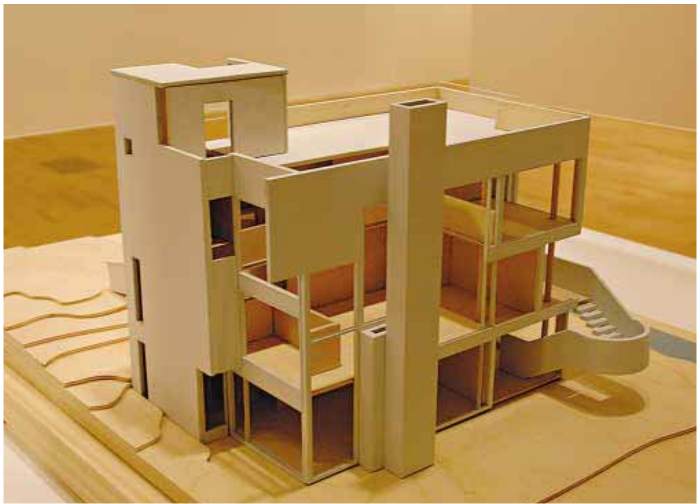
A modest incarnation of this retrospective had appeared last April at the Build Boston Residential Design Convention. In response to an invitation from the Boston Society of Architects to mount an exhibition there, RECORD deputy editor Clifford Pearson had solicited presentation boards from Record Houses “alumni,” mostly from the Northeast. Each panel included drawings and photographs chosen to convey the design.

From this two-day exhibition grew the much-expanded version shown at Pratt’s Manhattan Gallery. Following its debut there, the show is slated to travel to other (yet-to-be-confirmed) venues across the country, where it will likely evolve further, with boards and models by architects from each region.

At *Forever Modern*’s opening, RECORD editor in chief Robert Ivy presented the 50-Year Award to Ulrich Franzen and John Johansen, both of whom had published houses in that first issue. As Ivy said of the exhibition, “I can remember exactly where I was—whether still a student or a young architect—when I tore into the latest issue of Record Houses and saw some of these projects for the first time. They were innovative and exciting then, and great to see again.” And yes, even as we all inevitably grow older, some of the houses seem destined to remain forever iconically Modern. ■





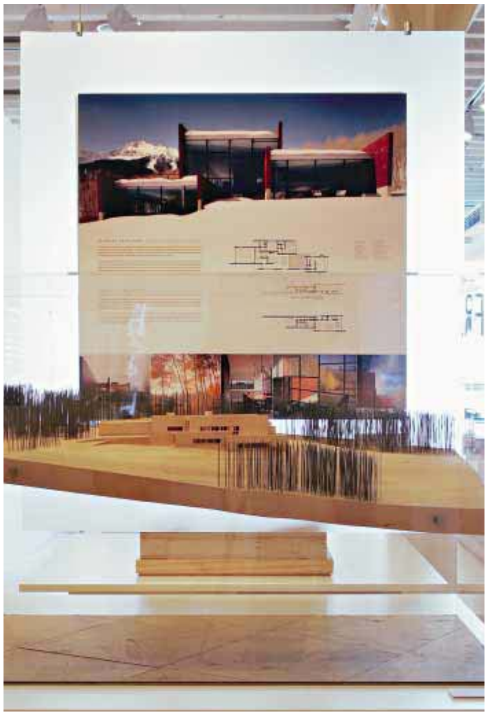


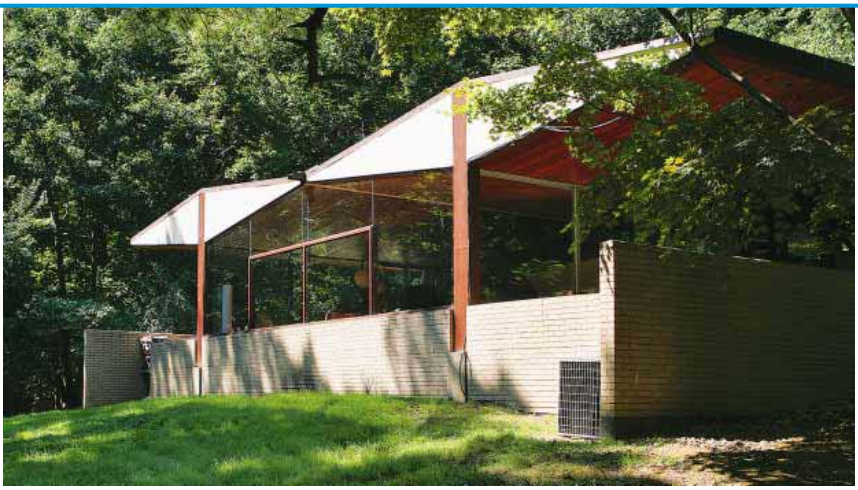
The show (left) presented a total of 14 models, eight of which Pratt students had built. The projects represented by models included Richard Meier’s Smith House (bottom right) and Hariri & Hariri’s Gorman Residence (bottom left).

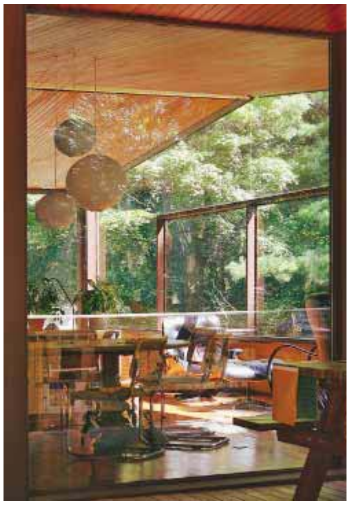
PHOTOGRAPHY: © CLAUDIA CASTRO/BLUMLEIN ASSOCIATES (BOTTOM LEFT AND RIGHT)

PICTURE WINDOW HOUSE

Along with panels of photographs, drawings, and text, the exhibition included models of such projects as Ulrich Franzen's own house, in New York State (above); Steven Holl's Turbulence House, in New Mexico (top right); Shigeru Ban's Picture Window House, on the Izu Peninsula, in Japan (far right); and Architecture Research Office's House in Colorado (right).







(Clockwise, from top left): A pathway leads into the wooded property; the house retains its double-diamond roof; the interior merges with the outdoors; the original Thermador oven is still in place.

A Record Houses Tour, Revisiting the Franzen House

In 1956, when we launched Record Houses*, its explicit mission was to show that regular people could comfortably live in Modernist houses—and actually benefit from the experience. So, the inaugural issue opened with Ulrich Franzen's own New York State home—showing not only the architecture, but also the Franzen family casually going about daily activities there.*

Last September 7, preceding the opening reception for Forever Modern*,* RECORD *hosted a tour of the Franzen House, courtesy of Fernando and Gloria Barnuevo, who had purchased the building in 2002 and rescued it from annihilation. Ulrich Franzen, now a youthful 85, led the way.*

The sunny weather, a lush, wooded setting, and a house that had remained avant-garde made the visit compelling.

The *Forever Modern* Opening Reception at Pratt Manhattan Gallery

1. *Architect Ulrich Franzen*
2. *Architect John Johansen and Pratt president Thomas Schutte*
3. *Record Associate Publisher Laura Viscusi (left) with George Beylerian*
4. *Fernando Barnuevo, owner of the Franzen House, with his daughter, Gabriela*
5. *(From left to right): From* ARCHITECTURAL RECORD *and The McGraw Hill Companies: Clifford Pearson, Anna Schlesinger, Sarah Amelar, Robert Ivy, Suzanne Stephens, Laura Viscusi, Johnson, and Norbert Young*
6. RECORD *editor in chief Robert Ivy*
7. *(From left to right): John Johansen, Suzanne Stephens, two unidentified guests, Sarah Amelar*
8. *Curator William Menking*
9. *Pratt dean of architecture Thomas Hanrahan (left) with Robert Siegel*

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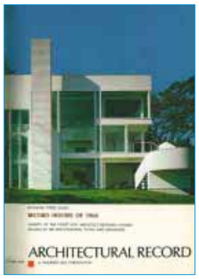
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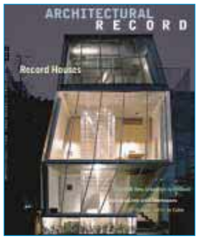
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Modernism Comes Home to Tucson

Correspondent's File

By Kenneth Caldwell

PHOTOGRAPHY: COURTESY UNIVERSITY OF ARIZONA ARCHIVES (TOP); © LIAM FREDERICK (RIGHT AND BOTTOM)

Tucson's young architects are returning to their Modernist roots, and Modernism is returning with them.

Anne-Marie Russell, executive director and chief curator of Tucson's Museum of Contemporary Art, sees the city's early pedigree in Native American and Hispanic adobe building as intrinsically Modernist. She says, "When building in the desert, you are dealing with reduced forms and materials that respond to the climate. Tucson is naturally, indigenously Modern—or, at least, the ethics of Modernism are in line with the 'less is more' ethos that one must adopt while living in what can be a harsh and unforgiving environment. There is no room for waste in the desert; you conserve everything—water, your energy, and so on."

The Southwest's rapid growth immediately after World War II nurtured several skilled Modernists, such as Arthur Brown, William Wilde, Nicholas Sakellar, and later Judith Chafee. Using structural steel, poured-in-place concrete, glass block, and aluminum sliding doors, combined with simple rectangular forms, sculptural sunscreens, and flat roofs, their innovative work responded simply to the desert's austere beauty and continued the sensitivity of the early settlers. Modern architects in the Southwest desert also incorporated steel and glass, making possible an open architecture that embraced the landscape and took advantage of the climate.

But then, according to John Messina, a research architect at the University of Arizona, the rapid growth of the 1970s and '80s, which was fueled in part by tax laws that played into the hands of developers, encouraged architecture of poor quality. Historical forms were divorced from their desert surroundings; strip malls crowned by plastic-tile mansard roofs lined busy boulevards; and neighborhoods sprouted gated subdivisions of tiny, multicolored stucco faux-pueblos.

A rebirth of Modernism

In the past few years, there have been promising signs of change. Comparatively favorable property prices and Tucson's stunning environs have attracted a knowledgeable client base. In response, locally born (or educated) architects, perhaps inspired by Rick Joy, AIA's national reputation, are expressing new ideas heralding a refreshing return to appropriate and contemporary desert design.

This reemergence can also be linked to the reinvigorated program at the University of Arizona's College of Architecture and Landscape Architecture, where Alvaro Malo, director of the university's architecture program since 1998, has established a Distinguished Visitor Studio and related lecture series that draws design professionals from all over the world.

Judith Chafee's Blackwell House (above), a Modernist landmark in Tucson, was destroyed in 1998. Rob Paulus's Puhler residence (right and below) was built on an infill lot and contrasts dramatically with its older neighbors.

The growing Museum of Contemporary Art has played an important public role, sponsoring several programs on architectural Modernism under the catchy title "Design Lab," such as well-attended lectures, tours, and exhibitions. Anne Nequette and R. Brooks Jeffery's excellent book, *A Guide to Tucson Architecture*, gives Modernism equal weight with earlier styles.

"The choice between Modernism and southwestern kitsch is not one of style but of principle," says local architect Will Peterson, who has designed in the Southwest for years and says he is witnessing a renaissance of his style of choice in Tucson. Peterson's forms take cues from architects such as Frank Lloyd Wright and A. Quincy Jones, designing his houses to recede into

Kenneth Caldwell is a writer and communications consultant based in Oakland, California.

the landscape. His Cook House features buff-colored concrete block, sandblasted to reveal the aggregate, and a weathering steel roof complements the color. In a Kahn-like move, Peterson organized the house around parallel masses of masonry, which vary in thickness from 4 to 8 feet.

Creating change

Despite increased awareness of Modern design, clients still have to be convinced. University of Arizona architecture graduates Miguel Fuentevilla and Sonya Sotinsky returned to Tucson from Berkeley in 1999 and began FORS Architecture + Interiors. One of their first commissions was the renovation of a midcentury house designed by William Wilde and owned by a family member of the architects. Fuentevilla and Sotinsky were eventually able to convince the owner of the original design's value. "In the beginning of our practice, it was frustrating, since most clients were asking for some version of an imagined history," says Sotinsky.

Since early commissions can be difficult to secure, friends as well as family are often key. Luis Ibarra and Teresa Rosano grew up in Tucson, met at the architecture school, founded Ibarra Rosano Design Architects six years ago, and have developed a reputation for muscular yet sensitive desert dwellings. One of their first commissions, the Garcia House, came from a trusting friend who gave them a lot of freedom. The carefully framed views, fragmented forms, and multiple levels of the Garcia House brought the architects a lot of publicity, which helped launch their practice.

Beyond the commissions of permissive friends and family, many Tucson architects are also turning to fringe neighborhoods and infill projects, and serving as developers. Rob Paulus, another locally raised and educated architect, has been a codeveloper for two multifamily projects in neighborhoods adjacent to downtown where few had ventured before. Although his Barrio Metallico is the more daring of the two—in an industrial neighborhood and clad in corrugated metal—it contains nine single-family dwellings on two city lots. At the Icehouse Lofts, a converted ice and cold-storage building from the early 1920s, Paulus has created 51 condominium units on 2.66 acres, a density almost unheard of in the desert. Interestingly, the project sold out quickly. Throughout the Icehouse, he reused several ele-

Ibarra Rosano converted a typical postwar Tucson brick bungalow into a Modern showpiece with dramatic vistas (right and below).

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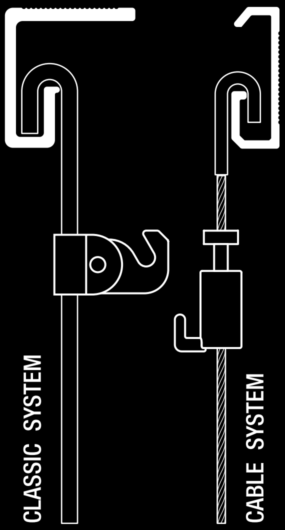

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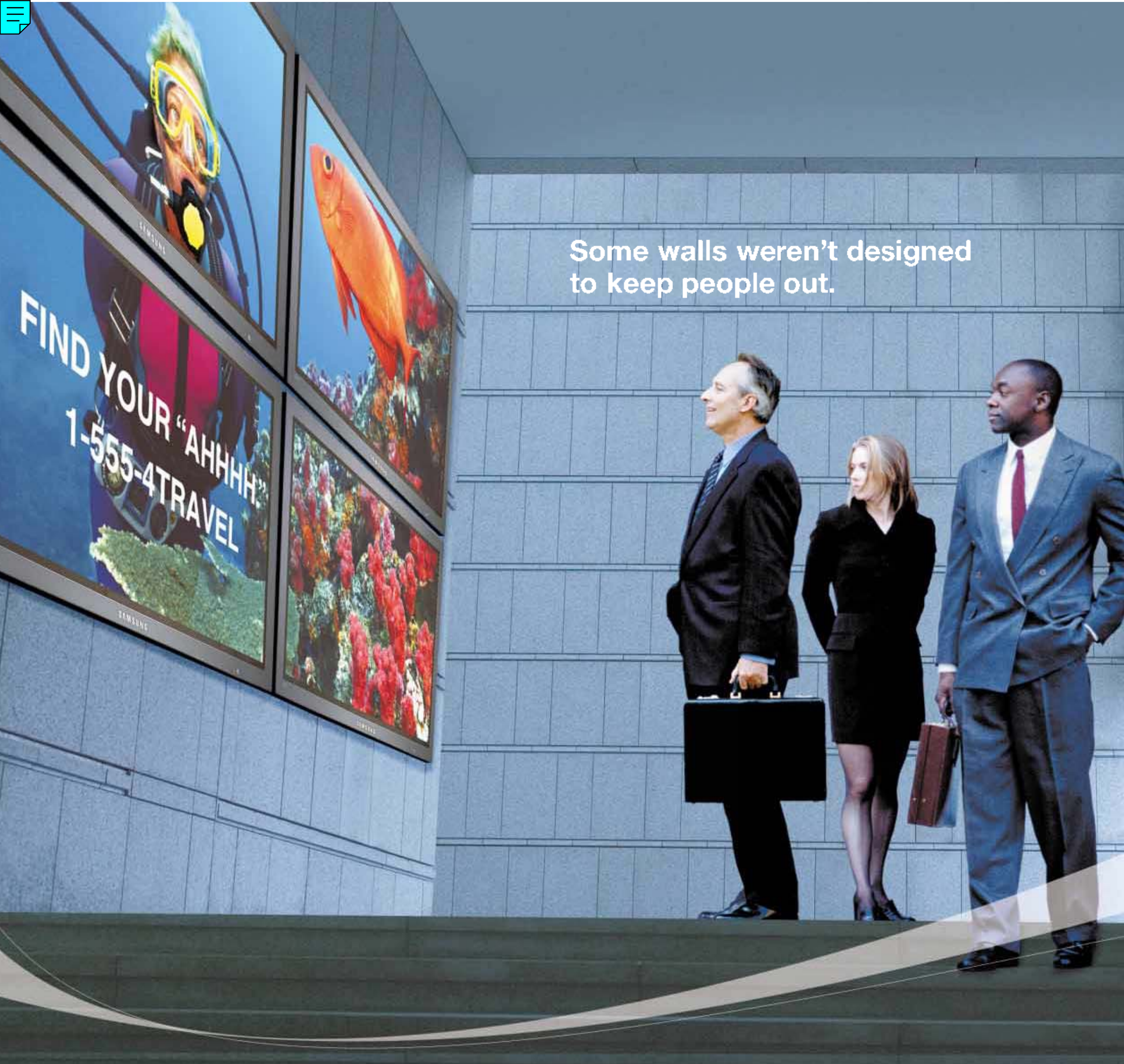
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ments, such as lumber, corrugated metal, and box-car siding. Paulus has now embarked on Indigo Lofts, a 22-unit project in a mixed-density neighborhood east of the university.

TUCSON'S LOWER PROPERTY PRICES AND STUNNING ENVIRONS HAVE ATTRACTED A KNOWLEDGEABLE CLIENT BASE.

Another example of innovative development is "Dreamspace," Ibarra Rosano's partnership with a client and locally educated architect/contractor, Page Repp. They are developing a number of imaginative infill projects, for which Tucson's typical lots (50-by-125 to -150 feet) offer plenty of opportunity. Working with one of these lots, Rob Bass, another local who now works for ABA Architects, designed a modest duplex behind a small house. It fills its allowable building envelope with two mirror-image, 1,000-square-foot shotgun units that were constructed for about $80 per square foot in 2002. The sandblasted gray concrete block serves as the interior and exterior finish, and the variety in the facades is created by the placement of the windows and Cor-Ten-steel panels. He comments, "What is positive about the emerging interest in Modernism here is that it is not a trend or a style, but an idea. Clients understand the harsh environment and want an appropriate response."

Like the first generation, the young architects are interested in the idea of Modernism, but they are also concerned with using as little energy as possible and integrating sustainable materials. Some, like Paulus and Ibarra Rosano, are bolder in their use of forms, materials, or color.

Tucson's new identity

In the mid-20th century, most of Tucson's Modernist architects were out-of-towners; these new Modernists have come of age in the desert. However, much of the client interest is coming from outside the area. Most of the buyers in Paulus's Icehouse are new to Tucson, and about half of FORS's clients are from out of state. "It is interesting that the people who are in tune with what the desert can offer are often from somewhere else," comments Sotinsky. As *The New York Times* and National Public Radio (NPR) have reported, many Californians are moving to Tucson because of the relatively low cost of real estate and because it isn't as congested as Phoenix.

Yet, while the principles of Modernism may be moving toward a more sensitive and sustainable architectural movement, its cooperative spirit has far to go in the larger context of planning policy. One promising sign is that Pima County, of which Tucson is the seat, recently created the Sonoran Desert Conservation Plan, which protects natural, historic, and cultural resources while regulating the built environment. Jeffery feels the plan's ranch conservation component could help define a much-needed urban growth boundary around Tucson. In 2003, a controversial zoning ordinance passed, limiting construction on the most visible peaks, but several grandfathered projects are still crawling up the mountainsides. Public transit is insufficient, and city-sponsored transportation improvements have been consistently voted down. Paulus jokes, "Here in Tucson we say there are two things we don't like: sprawl and density." The next challenge for Tucson's new wave of Modernists will be extending themselves beyond designing responsive buildings to finding solutions to this paradox. ■

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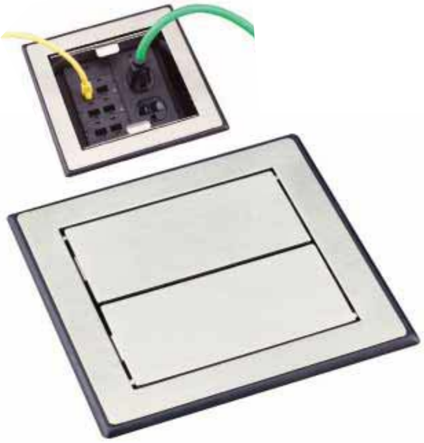

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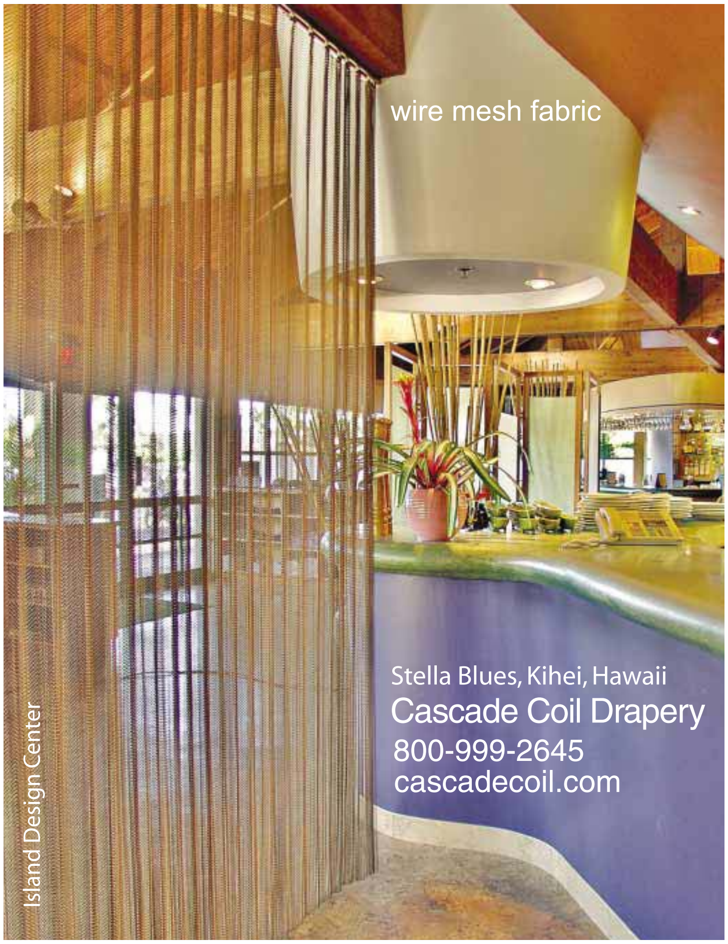

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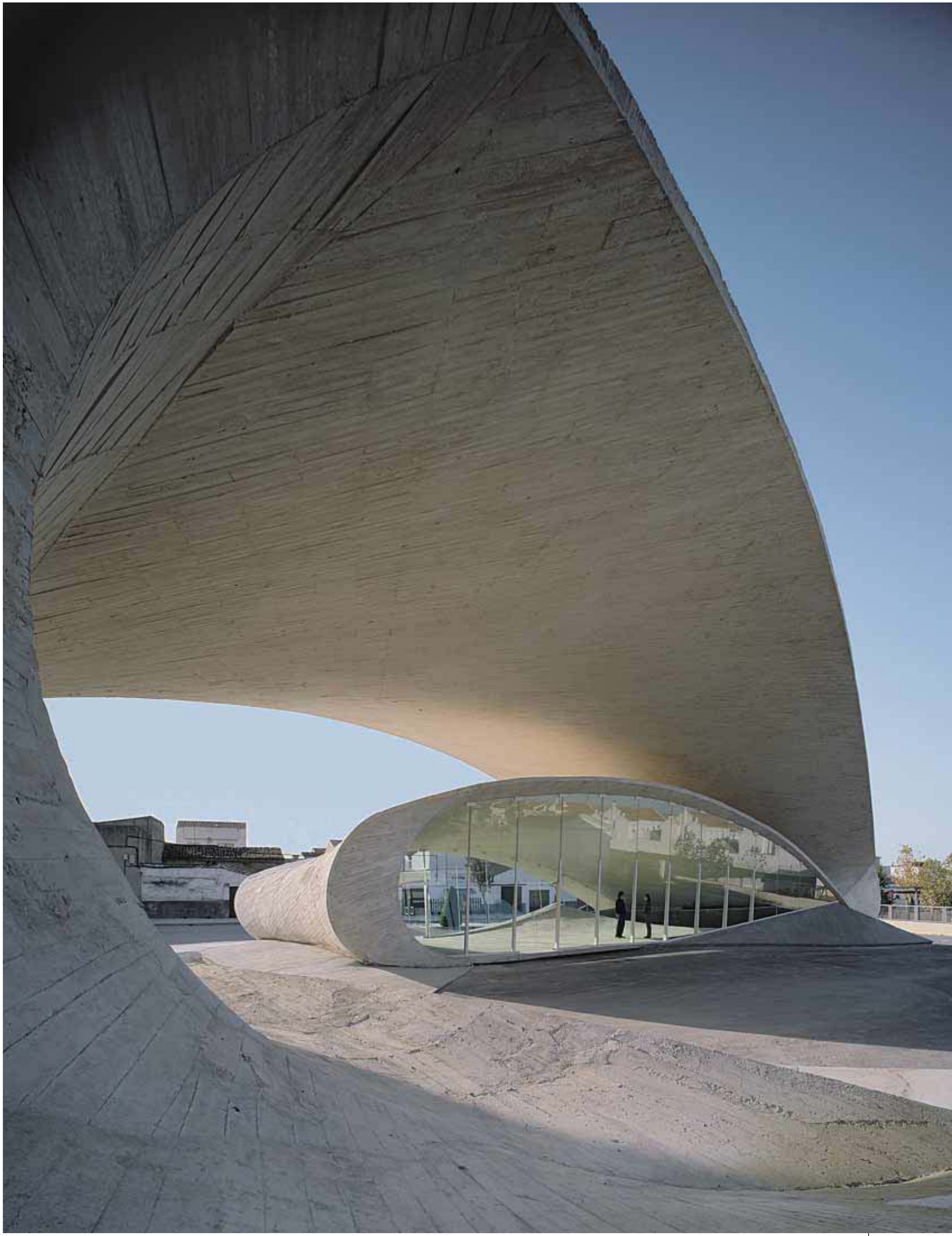
Snapshot



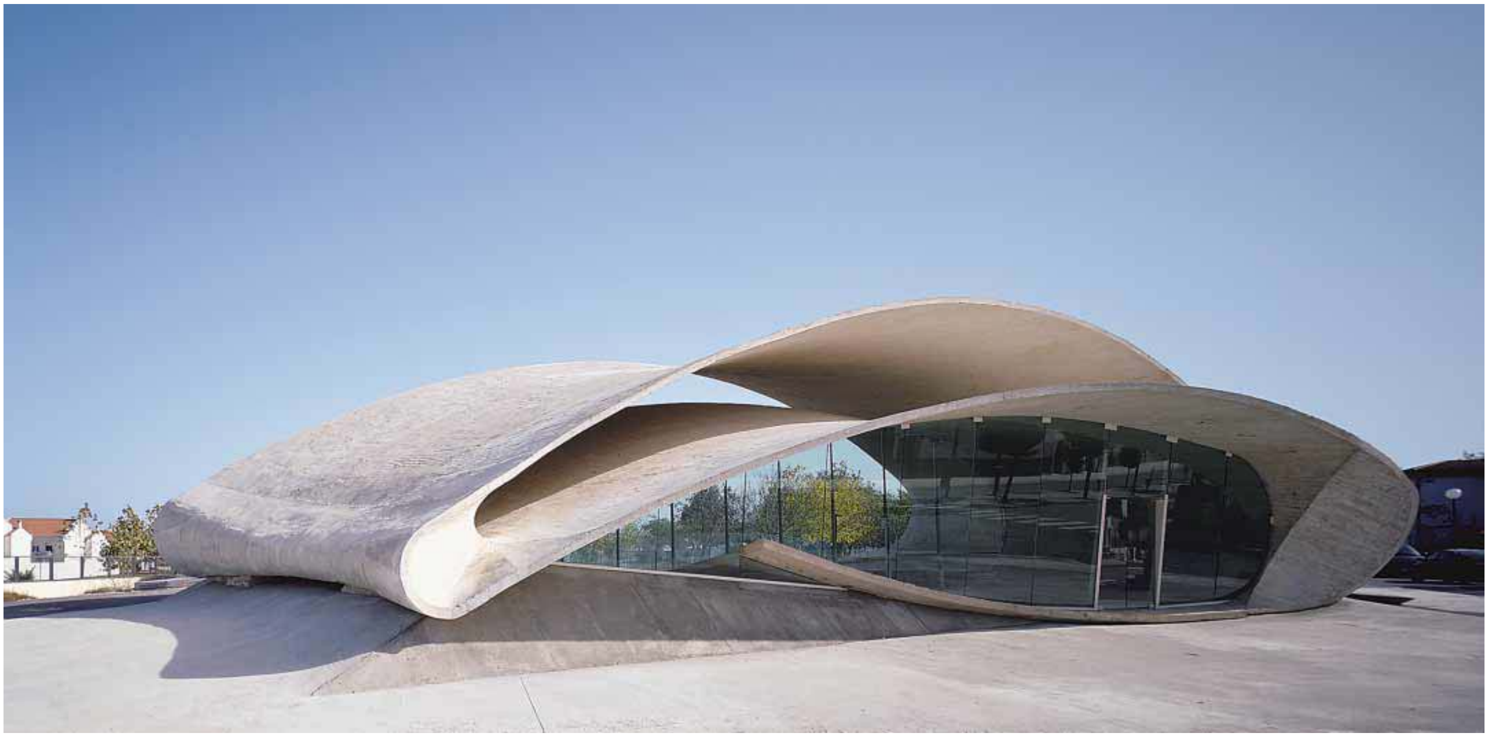
By Ingrid Spencer

This stop: Curvy concrete for a bus station in Spain

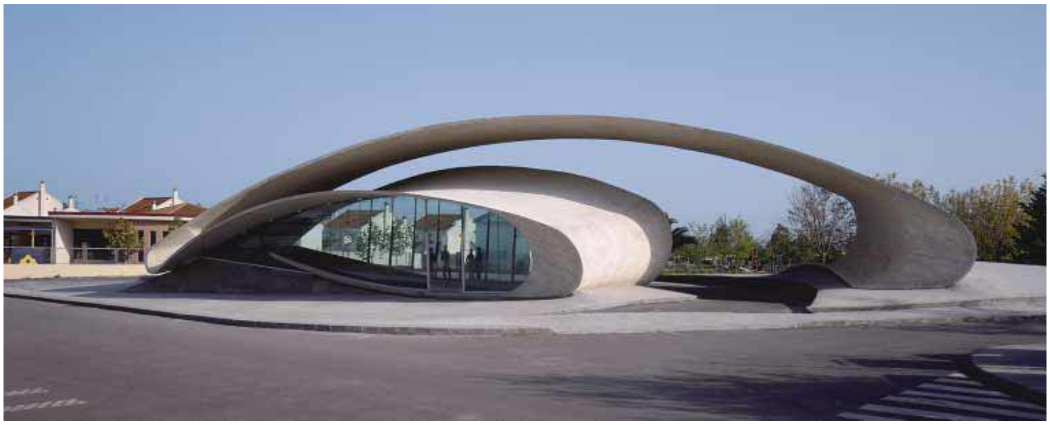
The small province of Casar de Cáseres, in the Extremadura region of western Spain, doesn't need modern architecture to make it a place out of a dream. The city seems frozen in time, with perfectly preserved Roman towers, Medieval castles, Moorish fortresses, stunning Gothic churches, and Renaissance palaces dating back to the 15th century. Yet now, when buses rumble down the labyrinthine streets and under the city's signature vaulted arches, they will come to a station by architect Justo García Rubío that announces by its architecture of fluid, sweeping curves that this is definitely the Dreamland stop.

PHOTOGRAPHY: © HISAO SUZUKI FÓTOGRAFO

Rubío says that when he was given the commission to design the simple public structure in his hometown, he decided that he wasn't content to create the usual glass box. "Because the station sits between a children's nursery and a school," says Rubío, "I wanted to make a building that would appeal to



A swooping concrete band forms the roof of the bus station's enclosed waiting area, while a larger curving sheet provides a shaded passenger drop-off point.



the childrens' imagination. I wanted to create an architecture that was not indifferent to a child's dream world." Inspired by the town's abundant vaulted arches, he envisioned a station that would be constructed of a simple white concrete band, folding over like a wide, flat ribbon in motion.

The program called for a canopy where buses could load and unload passengers away from the sun's glare, as well as a waiting area, café, and small store where tickets and maps would be sold. To economize the building's scale, Rubío sited the café and store in a 394-square-foot basement. Above grade, a white concrete sheet 2,428 feet long folds over a smaller, 1,247-foot-long sheet. The large sheet's curved form provides buses with a shaded drop-off point, and gives riders a sense of wonder an ordinary canopy could not convey. The smaller sheet contains the waiting area, with a gray concrete floor adding an additional tone to the white structure. "I wanted to enhance travelers' feelings of departing to or arriving from somewhere—a journey beginning or ending," says Rubío about the building's form. "The whole structure had to be functional, but I designed it to resemble a distinct, lightweight object that seemed able to be moved by the wind."

According to Rubío, the town locals have appropriated this object as their own, despite its unusual placement among the surrounding ancient structures. "People took it as a rare outstanding thing," says Rubío, "They don't see it as outlandish." A practical public building that's also a beautiful sculptural object? Sweet dreams indeed. ■

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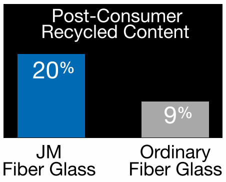

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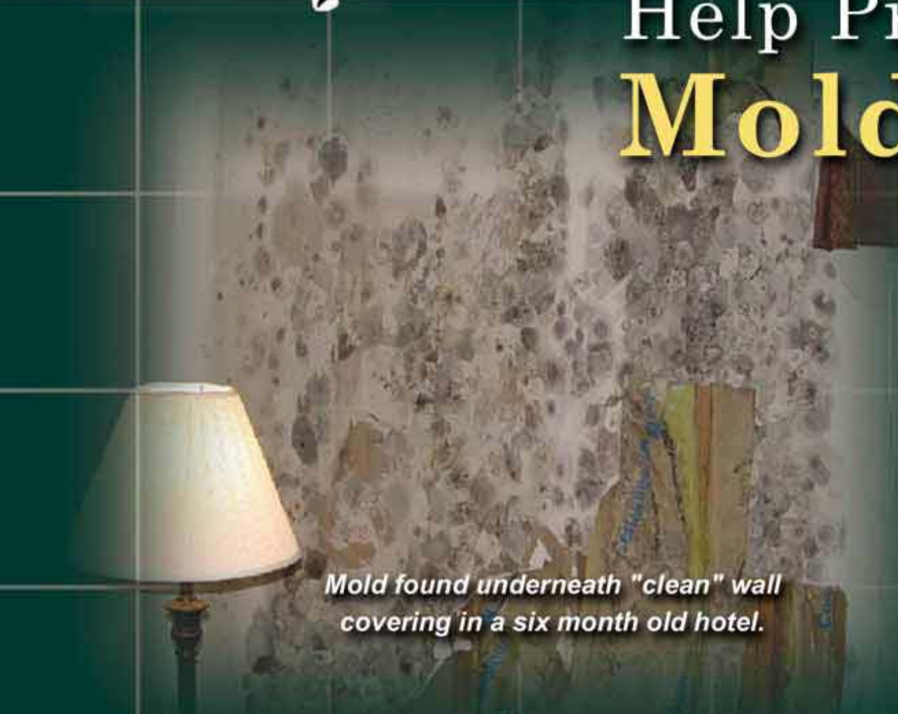
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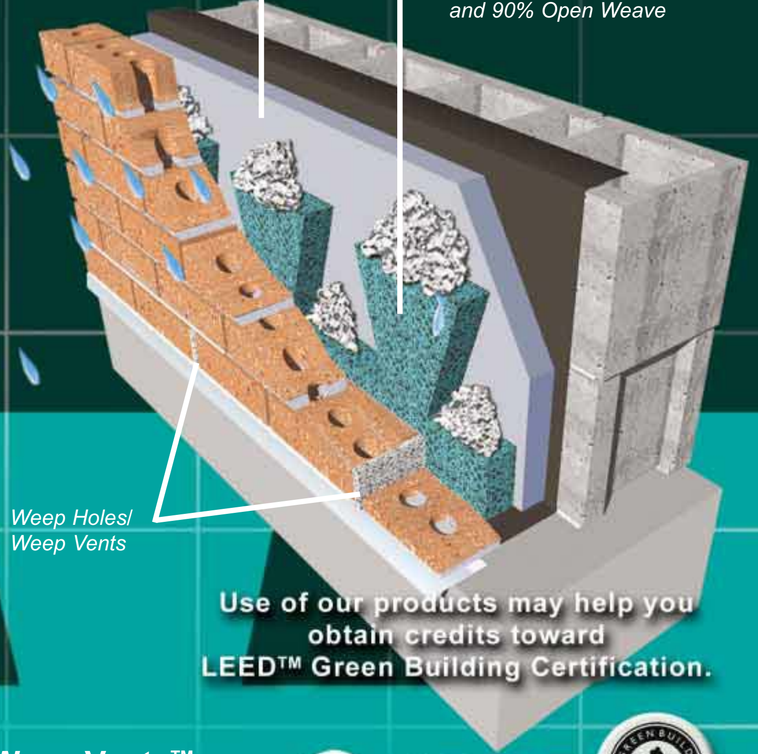

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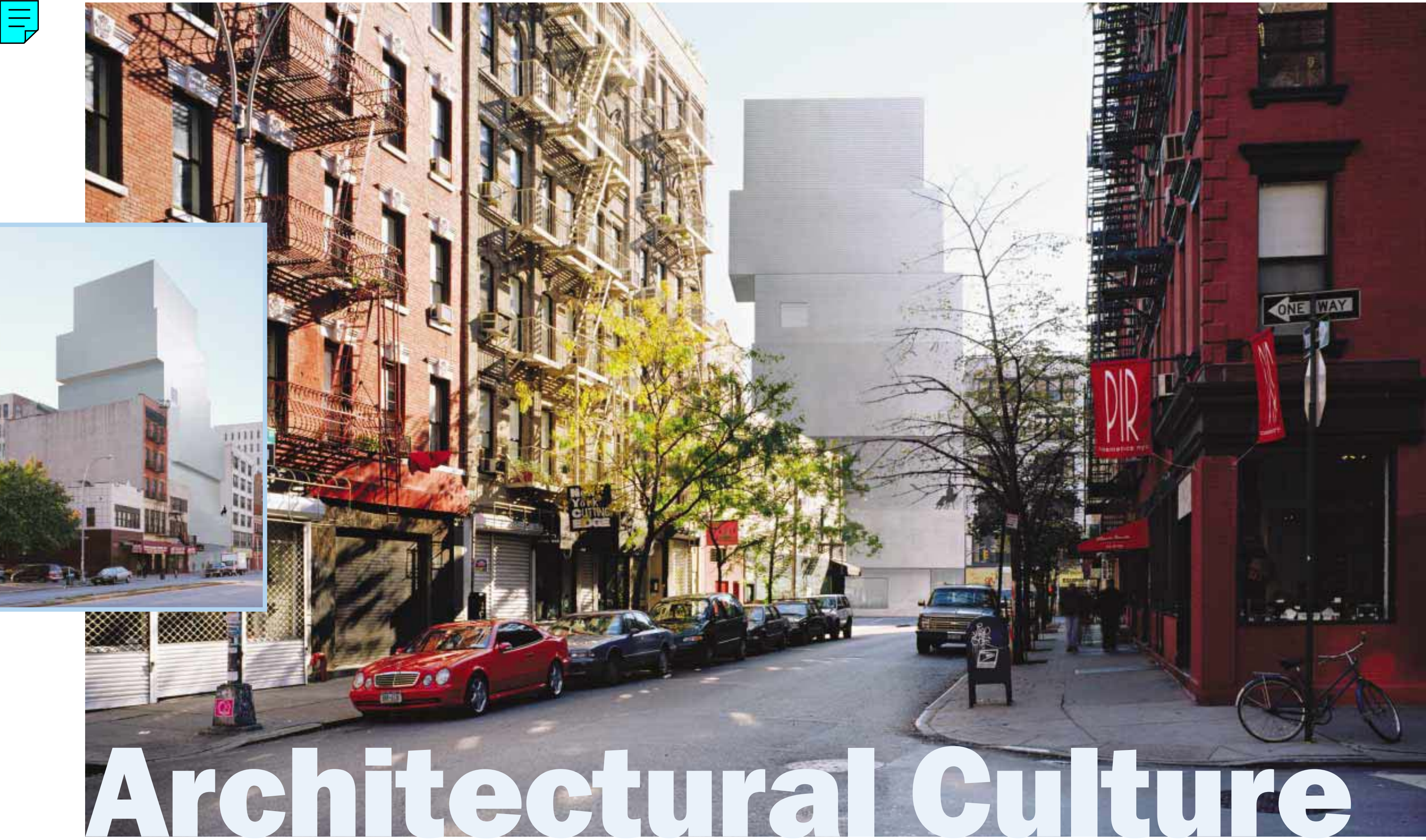

IMAGES: COURTESY NEW MUSEUM

Architectural Culture

By James S. Russell, AIA

The era of destination architecture is over," the artist Chuck Close declared in a conversation a couple of years ago. He was referring to the dramatic, highly expressionistic museum design that's made headlines in recent years. At that time, grand proposals for the Los Angeles County Museum of Art (LACMA), the Whitney Museum, a second Manhattan venue of the Guggenheim Museum, and the Guggenheim branch in Las Vegas had fallen victim to the end of 1990s exuberance.

Close's view has yet to prevail, as the variety of projects on view in this issue show. But it speaks to a tension about—if not a downright hostility to—expressive museum architecture that doesn't look like its going away. Museums, with their malleable programs, have enabled architects to interpret contemporary reality, to create emblems of who we are, and to redefine the meaning of the physical places we inhabit. In recent years, museums have been essentially the only armature for artistic innovation in public buildings.

Civic identity versus the place of art

Exciting design's potential to transform its setting bothers Close and other critics because it can mean the creation of a context that does not put art first. Consider Daniel Libeskind's addition to the Denver Museum of Art. Libeskind's structure explodes into gigantic, bravura shards. For a museum that displays art from five continents, many cultures, and several eras in many media, this design will certainly draw criticism that the container overshadows the contained. But this is a structure about Denver's emerging cultural identity as much as it is about its collections. Museums, for better or worse, are civic status symbols, and they enliven city life. For donors, business interests, museum boards, and citizens, that's a good reason to support them. It's why Denver has been able to raise $60 million from trustees and another $62.5 million from a bond approved by voters.

For similar reasons, the diminutive Akron Art Museum in Ohio asked Coop Himmelb(l)au to add 9,000 densely sculpted square feet. "People here see the industrial past as over and are eager to move into the 21st century," explained director Mitchell Kahan. Recognizing how costly and complicated it is to grow, he added, "We decided that if we were going to go through the suffering it takes, we wanted to make a real contribution, not just add another building."

Lisa Phillips, director of Manhattan's New Museum of Contemporary Art, echoed many of her colleagues when she said in an interview, "Architecture is an art that should be advanced like every other art." Fresh views of architectural possibility were certainly important to clients like the de Young Museum (page 104), the Walker Art Center [RECORD, July 2005, page 88]—both with Herzog & de Meuron—and Boston's Institute for Contemporary Art (Diller Scofidio + Renfro). That aspiration can collide with the institution's mission, however. Phillips was determined to find a young architect with a unique outlook for her museum's first freestanding building. She chose SANAA's design of coolly Minimalist, stacked, shifting boxes. "Artists repeatedly told us that they like exhibiting in contemplative, quiet spaces, even historic spaces," she explained. Such criteria tend to lead away from aesthetic exploration toward the homogenizing white-cube gallery norm. It works for artists, Phillips added, "because there's no visible authorship."

Architecture without architects?

In dealing with artists' and curators' resistance to the visible hand of the

versus Museum Culture

IMAGE: COURTESY ARMIN HISS

architect, several recent museum designs add a dollop of assertiveness to the white-drywall recipe: the Nelson-Atkins Museum, Kansas City, by Steven Holl, and Tadao Ando's art and conservation building for the Clark Art Institute, in Williamstown, Massachusetts, among them.

To the degree that museums move farther down this path, there's less for the architect to contribute. The Dia Art Foundation's highly successful venue in Beacon, New York, raises the question of whether the architect is needed at all [RECORD, October 2003, page 108]. Dia is building again, replacing an unsuitable Manhattan loft building with a new venue inside an industrial structure. Though Dia has engaged Roger Duffy, of the New York office of Skidmore, Owings & Merrill, it's clear that revealing the old structure's unselfconscious past will form its primary "expression."

A less radical design approach in deference to art (and to economy) could be called the "new prudence." When the Whitney Museum switched from Rem Koolhaas to Renzo Piano, it went from an architect "who would make the building the art," as current director Adam Weinberg put it in an interview, to "someone who understands that this is a museum with art to show in it." Architects of talent and insight can manage both successfully, but the process is not for the faint of heart. Since Koolhaas's design proposed no less than to reinvent the art-viewing experience, the Whitney decided it had to play it safer once it concluded that it could not support such an ambitious mission either curatorially or financially. Allied Works' design for an addition to the Seattle Art Museum attempts a unique identity but also must defer to the utterly bland office tower to which it is laminated. Principal Brad Cloepfil has to perform this act of design diplomacy thanks to an economically advantageous real estate deal the museum made with local banking giant Washington Mutual. When it opens, we'll see whether either the architecture or the museum's function pays too deep a price.

The Renzo Effect

If expressionistic museum architecture seems too demanding, Renzo Piano awaits. Along with Atlanta's High Museum of Art (page 130) and the Whitney Museum, Piano's Genoa-based firm is designing an addition to the Pierpont Morgan Library, also in New York; the California Academy of Sciences in San Francisco's Golden Gate Park; and additions to the Art Institute of Chicago, the Isabella Stewart Gardner Museum in Boston, and LACMA (where a costly Koolhaas overhaul was traded for more modest additions by Piano). You'd have to go back a century, when McKim, Mead and White conjured Beaux-Arts palaces for young cities besotted by City Beautiful ideals, to find an architect of comparable influence on major American cultural institutions.

Piano is that rare architect admired by curators, directors, critics, and fellow architects alike. His 1987 Menil Collection and 1995 Twombly Pavilion in Houston are regularly named the best museum buildings of the past 25 years. The secret of Piano's success is not only to accept the limitations inherent in the museum program, but also to adapt them sensitively to the unique circumstances of the client—whether those be the devilish intricacies of the Morgan's confined site or the shapelessness of central Atlanta. Piano said in an interview that he hates style, "this rubber stamp that makes your work recognizable." His very sensitivity to curators and deference to setting may be entrapping him, though, in what he calls style's "golden cage." The Art Institute, LACMA, the Morgan, and the High look strikingly similar and rather like the Twombly: elegant glass, metal, and stone pavilions, capped by layered, light-monitor roofs.

Do we ask museum architecture to do too much?

The 1997 opening of Piano's Beyeler Museum, near Basel, Switzerland [RECORD, May 1998, page 160], was buried under the hoopla surrounding the Bilbao Guggenheim, which welcomed its first visitors only days earlier. Yet it may have inspired a "Renzo Effect" potentially more influential than Gehry's masterpiece. After all, Piano's Nasher, with Louis I. Kahn's Kimbell Art Museum (1972), Ando's Modern Art Museum of Fort Worth [RECORD, March 2003, page 98], and Pei Cobb Freed's Meyersohn Symphony Hall (1989) have created a "critical mass of culture" that attracts visitors worldwide to Dallas and Fort Worth, says Howard Rachofsky, a trustee at several area cultural institutions.

And yet neither the Renzo nor Bilbao Effects may be good for American architecture. For one thing, the evident brilliance and construction quality of buildings like the Kimbell or the Nasher have not trickled down in Dallas, nor in most other cities that have similarly added architectural crown jewels. Museum architecture assumes such outsize importance because Americans work, play, celebrate, worship, and mark the great events of life's passage mostly in settings of little architectural significance. Richard Meier's just-completed city hall in San Jose, California, stands out not just for its architecture but because municipal architectural aspiration is so rare.

Nowadays, extraordinary architecture is almost solely devoted to housing extraordinary works of art. Is it asking too much of museums—perpetually struggling to meet their mission and please their many stakeholders—when we expect them also to be symbols of civic pride and vehicles of artistic exploration? Ironically and regrettably, elite architecture for elite art seems to hasten the cultural isolation of both at a time when the nation searches for authentic place and real values. ■

Bravura museum architecture such as Daniel Libeskind's Denver Art Museum (above) and Coop Himmelb(l)au's Akron Art Museum (page 83) advances architecture as an art and stokes civic pride.

Museum design is now so important because

MAJOR AMERICAN MUSEUM PROJECTS

Project and Location	Design Architect	Vitals	Date Opens
University of Alaska Museum, Fairbanks	HGA	Curving, interlocking forms open collections to spectacular views	Sept. 2005
Getty Villa, Malibu, California	Machado & Silvetti	Overhaul of Pompeian-style structure that was Getty's pre-Meier home	Jan. 2006
J.P. Morgan Library, New York City	Renzo Piano Building Workshop	75,000-square-foot addition to three-building landmark site	April 2006
Phoenix Art Museum, Arizona	Tod Williams and Billie Tsien	40,000 square feet remodeled and 30,000 square feet of new space	Spring 2006
Glass Pavilion Toledo Museum of Art, Ohio	SANAA	Curved glass panels house 76,000-square-foot glass-art collection	Mid-2006
Ohr-O'Keefe Pottery Center, Biloxi, Mississippi	Gehry Partners	Pavilions, classrooms, and exhibitions on the "mad potter of Biloxi" (*completion delayed by extensive Hurricane Katrina damage)	July 2006*
Museum of Contemporary Art San Diego	Gluckman Mayner	Historic railroad-baggage building converted for exhibitions with three-story addition	Fall 2006
Denver Art Museum	Daniel Libeskind	146,000-square-foot new structure of crystalline shards adds to Gio Ponti landmark	Fall 2006
Institute of Contemporary Art, Boston	Diller Scofidio + Renfro	65,000-square-foot waterfront building with both exhibition and performance spaces	2006
Metropolitan Museum of Art, New York City	Kevin Roche John Dinkeloo and Associates	Restore McKim, Mead and White Roman galleries; rework education spaces and Islamic galleries	Spring 2007
Akron Art Museum, Ohio	Coop Himmelb(l)au	Add nearly 10,000 square feet of galleries plus amenities in sculpturally dramatic wing	Spring 2007
Philadelphia Museum of Art	Gluckman/Mayner	Galleries, cafés, library, and education spaces in elegant Art Deco building next to museum	Spring 2007
Olympic Sculpture Park, Seattle	Weiss/Manfredi	8.5-acre folded landscape descends to Elliott Bay	May 2007
Nelson Atkins Museum, Kansas City, Missouri	Steven Holl	165,000-square-foot addition underground with luminous lanternlike pavilions in sculpture garden	Mid-2007
Museum of Arts and Design, New York City	Allied Works	Controversial overhaul of Edward Durell Stone design	Mid-2007

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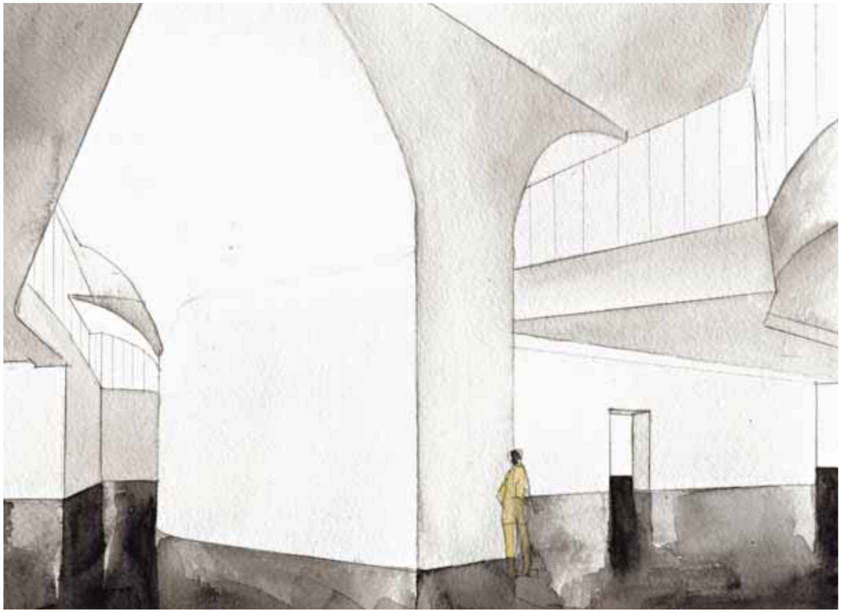
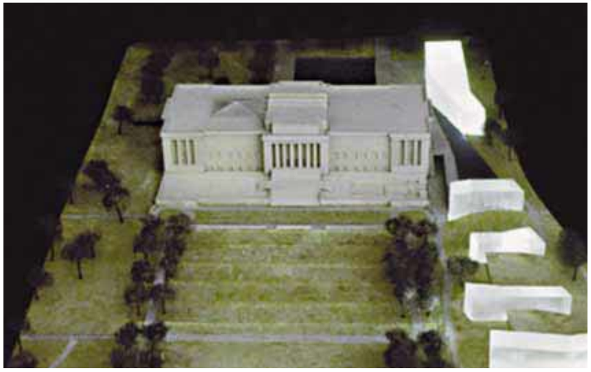
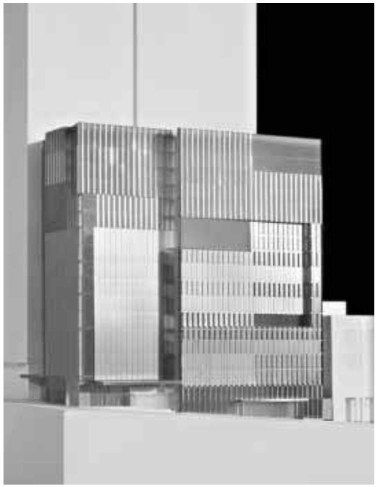
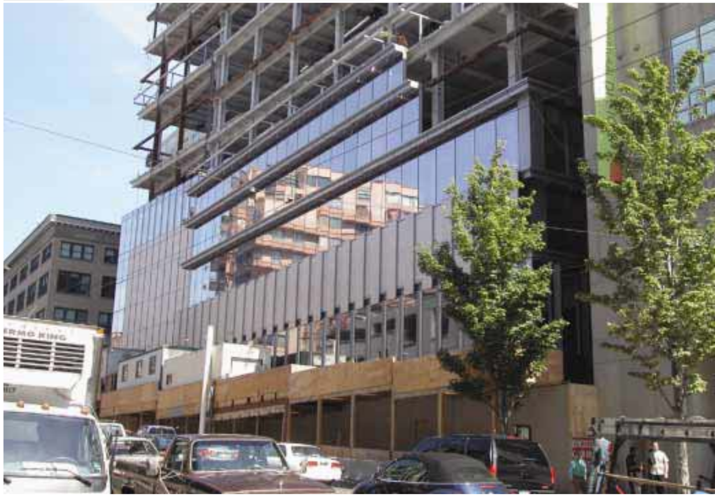




Steven Holl's underground addition to the Nelson Atkins (above and left) defers to the original building, while its interior spaces, though assertive, create serene places to view art.



While SANAA's New Museum (page 82) intends to foreground art, the Seattle Art Museum (left and below) must reconcile identity and art viewing with the style of the office building to which it is attached.



it is architecture's only venue for artistic growth

Project and Location	Design Architect	Vitals	Date Opens
New Museum, New York City	SANAA	Seven-level, 60,000-square-foot new building in cubes of glass and metal	Summer 2007
Dia Foundation, New York City	Skidmore, Owings & Merrill	34,000-square-foot replacement for existing structure to be connected to new park on abandoned railway	Fall 2007
Detroit Institute of Arts	Michael Graves	Renovation and expansion; reinstallation of collections	Fall 2007
Seattle Art Museum	Allied Works	Eight-levels, 118,000 square feet of eventual 300,000-square-foot addition attached to office tower	2007
Whitney Museum, New York City	Renzo Piano Building Workshop	Nine-level metal-shingled tower added to Marcel Breuer landmark	Jan. 2008
Los Angeles County Museum of Art	Renzo Piano Building Workshop	Three-phase overhaul with first phase a $130 million wing and entry pavilion	Jan. 2008
California Academy of Sciences, San Francisco	Renzo Piano	Sod-roofed new building combining a planetarium, a rain-forest exhibit, and an aquarium.	June 2008
Clark Art Institute, Williamstown, Massachusetts	Tadao Ando	32,000-square-foot, $20 million art and conservation building	Summer 2008
Art Institute of Chicago	Renzo Piano	$280 million addition to venerable encyclopedic museum	Jan. 2009
Crystal Bridges Museum, Bentonville, Arkansas	Moshe Safdie	100,000-square-foot new museum built by Wal-Mart heir around a stream and pond	May 2009
Parrish Art Museum, Southampton, New York	Herzog & de Meuron	New 80,000-square-foot building in artists' haven	2009
Natural History Museum of Los Angeles County	Steven Holl	120,000-square-foot folded-roof addition for research and exhibitions	2009
Isabella Stewart Gardner Museum, Boston	Renzo Piano	Add new spaces to landmark "Venetian" villa for exhibitions, programs, and visitor services	TBA
Weissman Art Museum, Minneapolis	Gehry Partners	Four new galleries and a café	TBA
St. Louis Art Museum	David Chipperfield	120,000-square-foot addition adds 40 percent to landmark in Forest Park; due to break ground in 2007	TBA
Asia House, Houston	Yoshio Taniguchi	New $30 milllion building project in arts district	TBA

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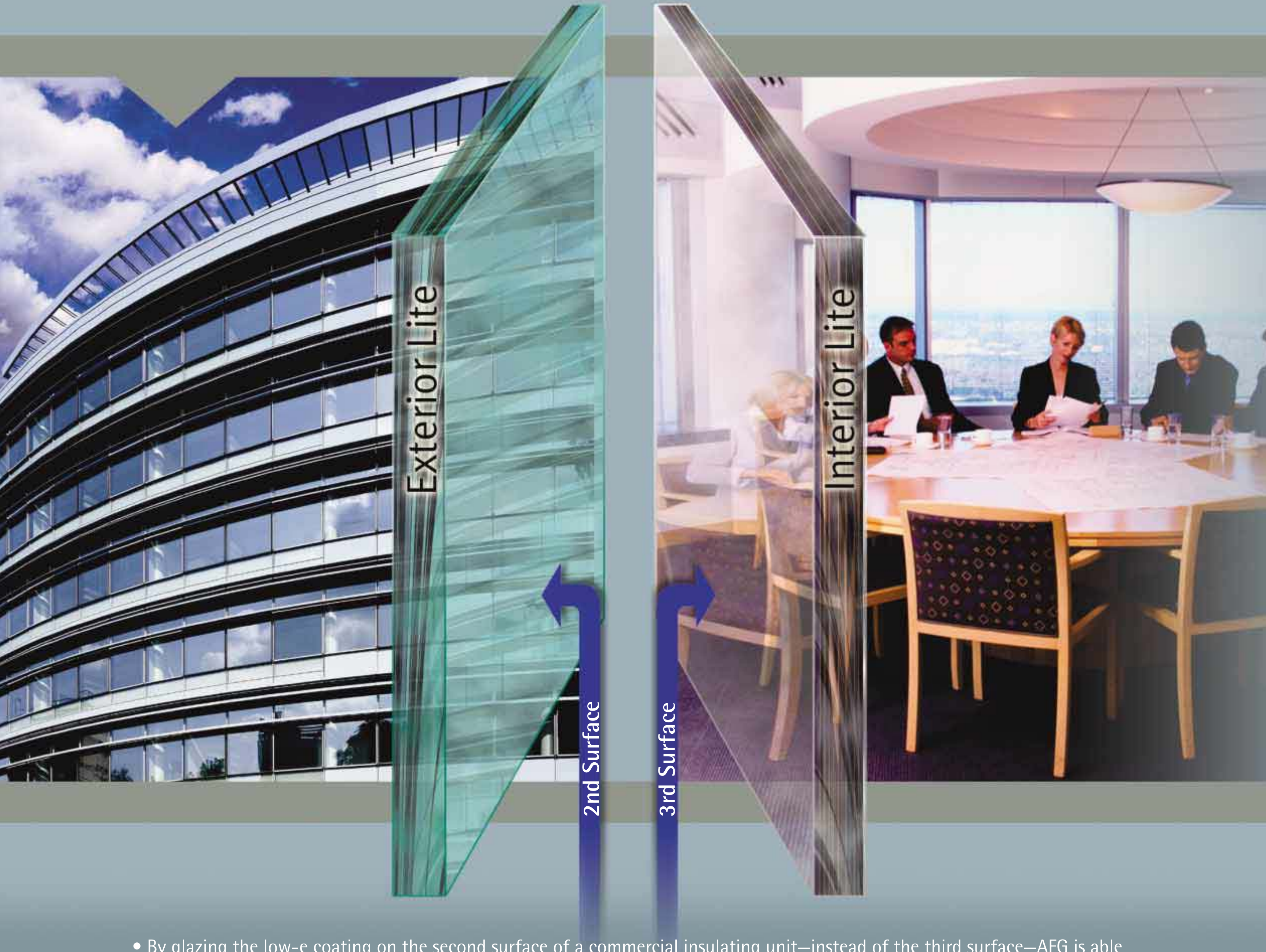

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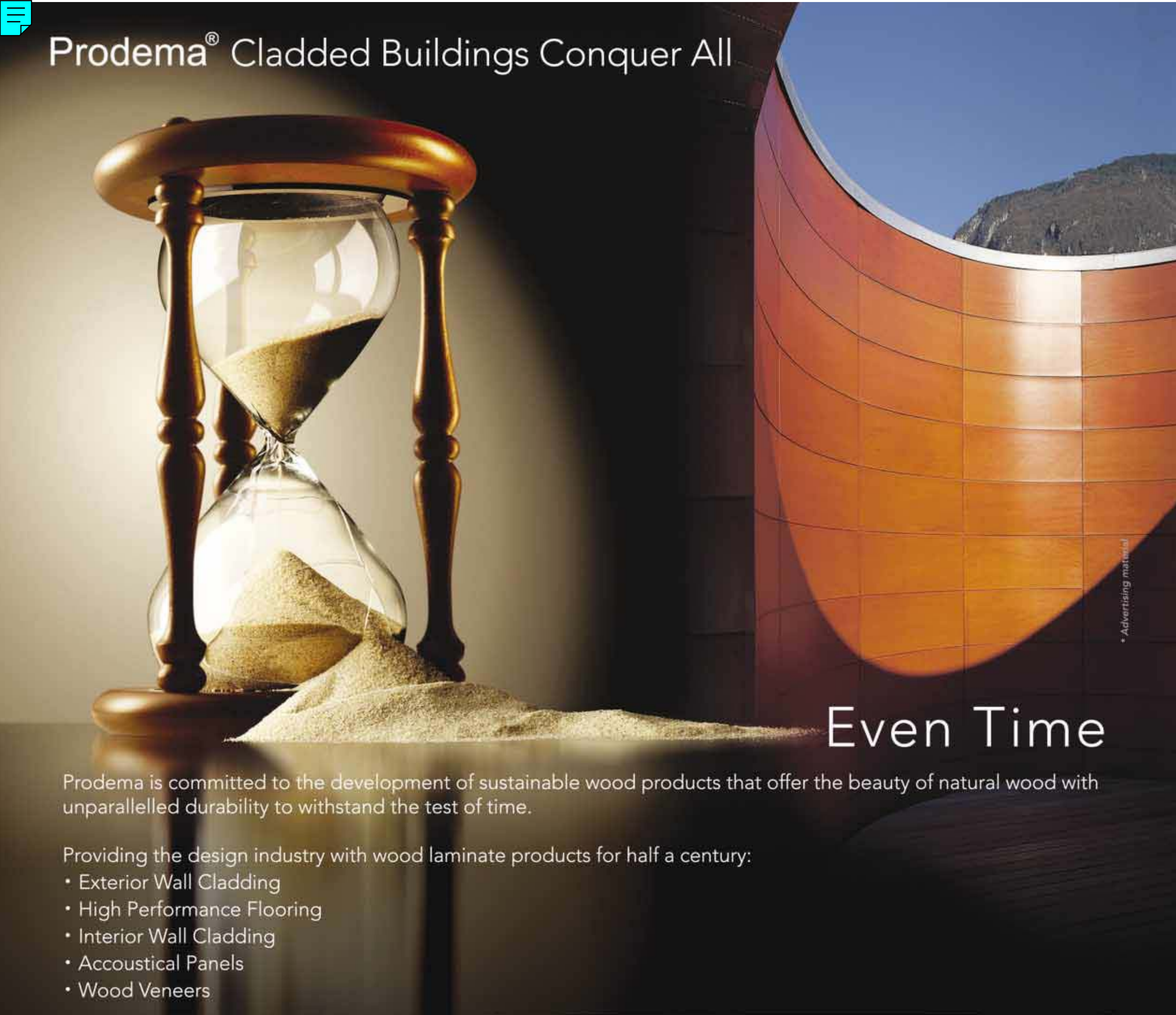

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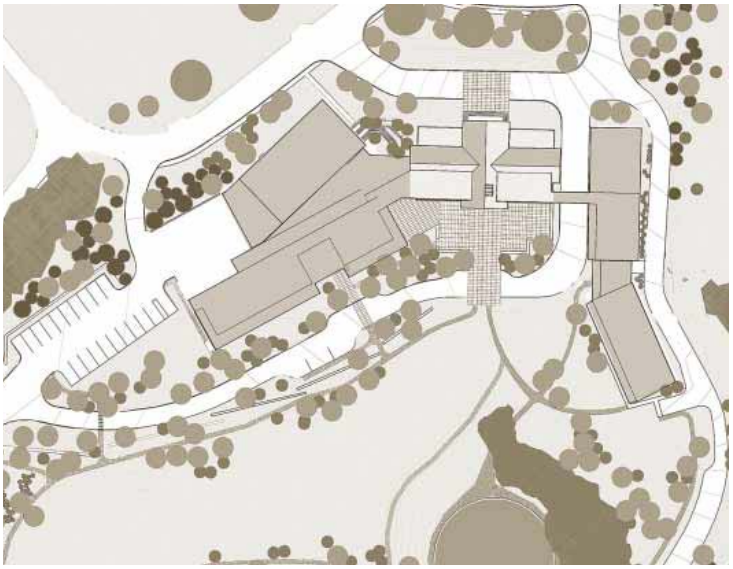
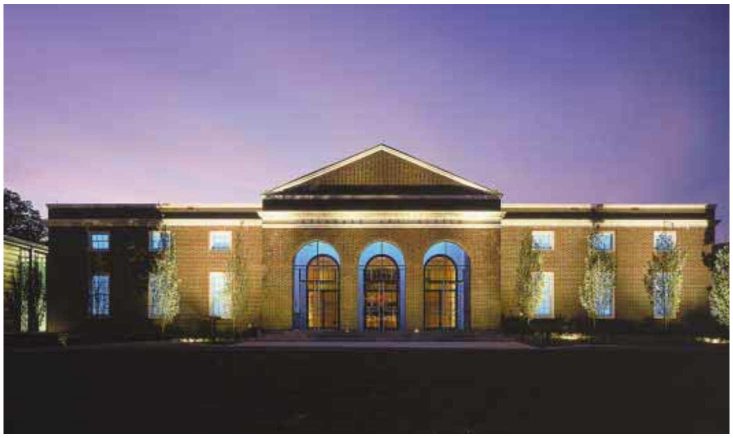
Museum additions American style

While spectacularly sculptural or strikingly minimal museums grab the attention of the media, less-noticed, small-scale additions to existing museums continue to proliferate vigorously. The ticklish problem facing architects about to embark on small expansions revolves less around the need to make a grand statement than the challenge of how to fit in with existing buildings. In the case of the three museums on the following pages, the architects were dealing with structures designed in a domestically scaled Classical style prevalent in the 20th century. In coming up with the proper expression, all of the architects involved, Ann Beha Architects of Boston, Platt Byard Dovell White of New York City, and Frederick Fisher and Partners of Los Angeles, opted for a low-key Modernist vocabulary. The predilection for Modernism might seem quite surprising coming from Platt Byard Dovell White, since two of its principals, Samuel White and Charles Platt, are direct descendants of two of the best-known Beaux-Arts-inspired architects of the turn of the 20th century, Stanford White of McKim, Mead and White, and Charles Platt, designer of numerous stately country houses and gardens.

Nevertheless, Platt Byard Dovell White reflect partner Paul Byard's admonition in the *Architecture of Additions* (1998) that the new should "bounce off" the old, but not repeat it. This firm, like Ann Beha's and Frederick Fisher's, which have been specializing in Modernist art museums, chose to work with principles Mies van der Rohe promulgated with his well-proportioned, finely scaled, steel-framed structures finished in elegant materials. These architects have given the additions a different twist by using current materials and techniques, such as prepatinated copper and advanced lighting, with finesse. *Suzanne Stephens, with Sarah Cox*





Ann Beha Architects, a Boston firm, has expanded and renovated the Delaware Art Museum in Wilmington (center in site plan, top), a 1938 Georgian brick structure with a 1987 wing (rear left, in site plan). Artist James Turrell created lighting for the original building's arches and facade (above), and Michael van Valkenburgh provided landscaping.

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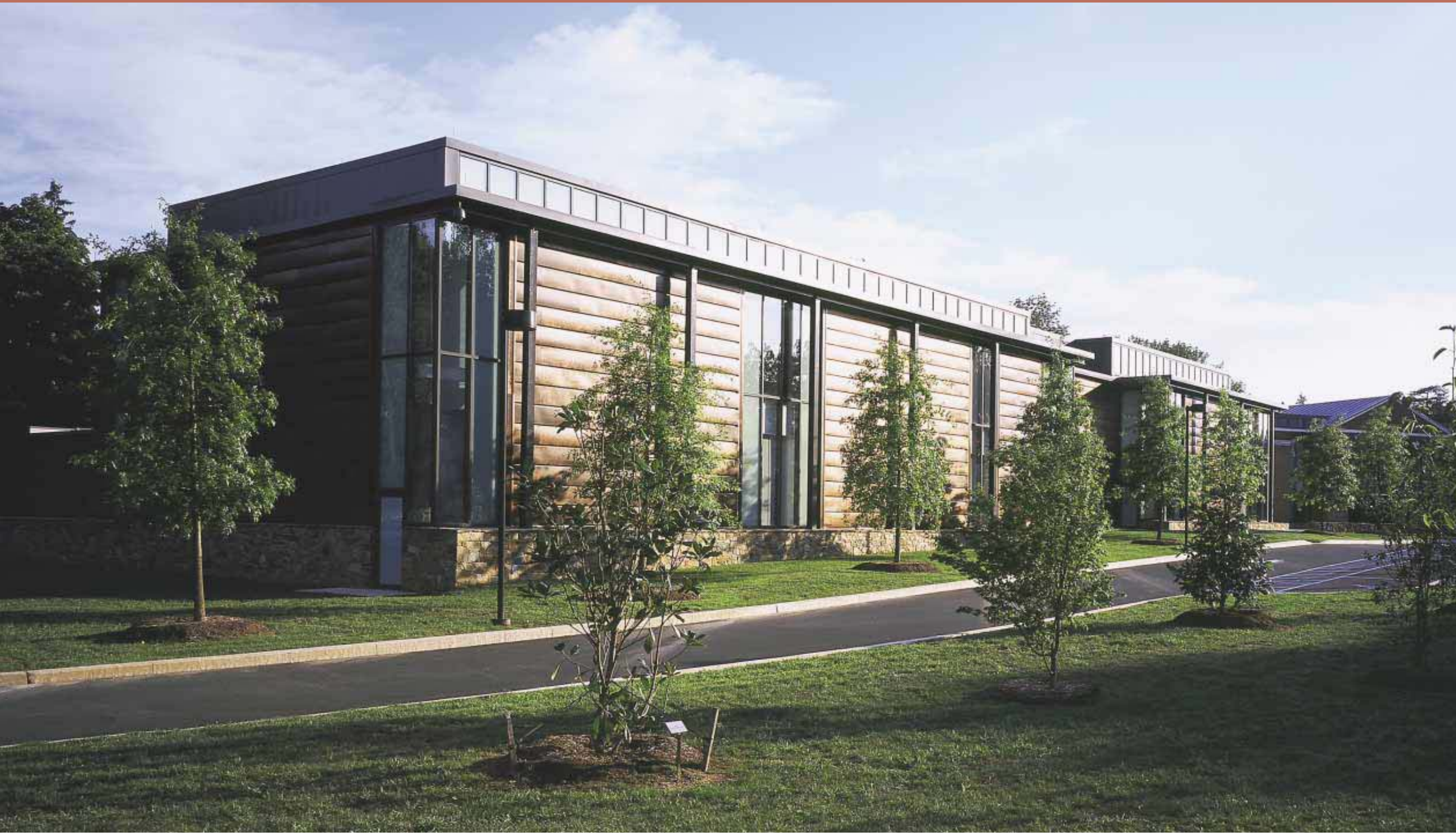
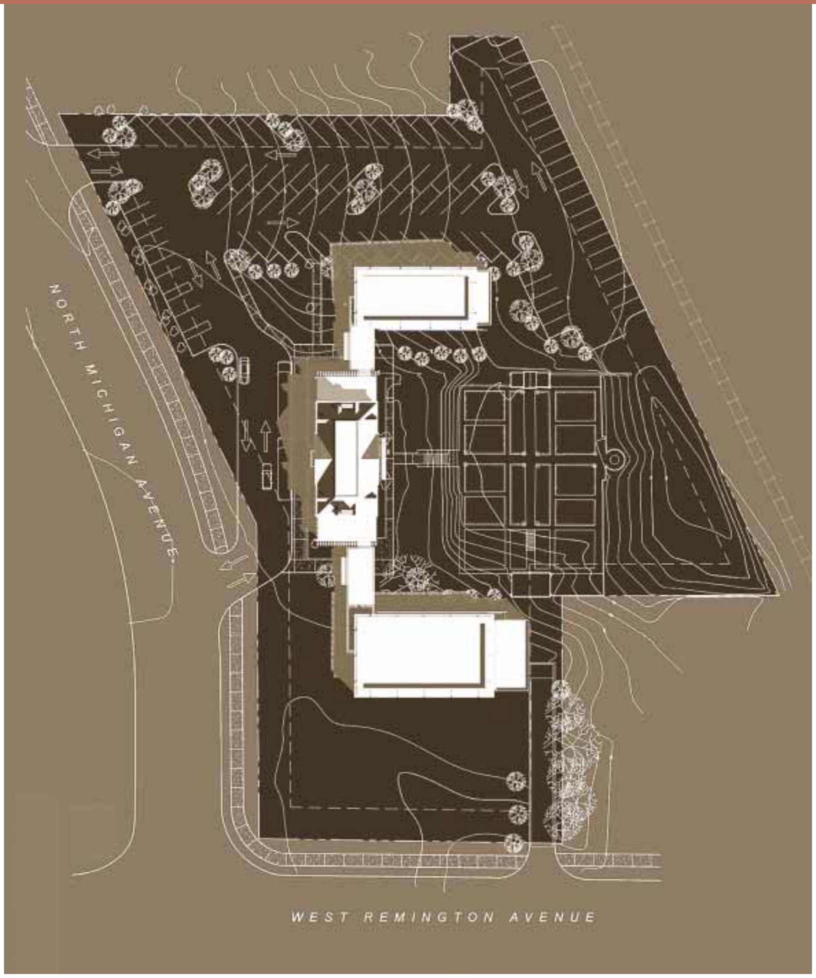
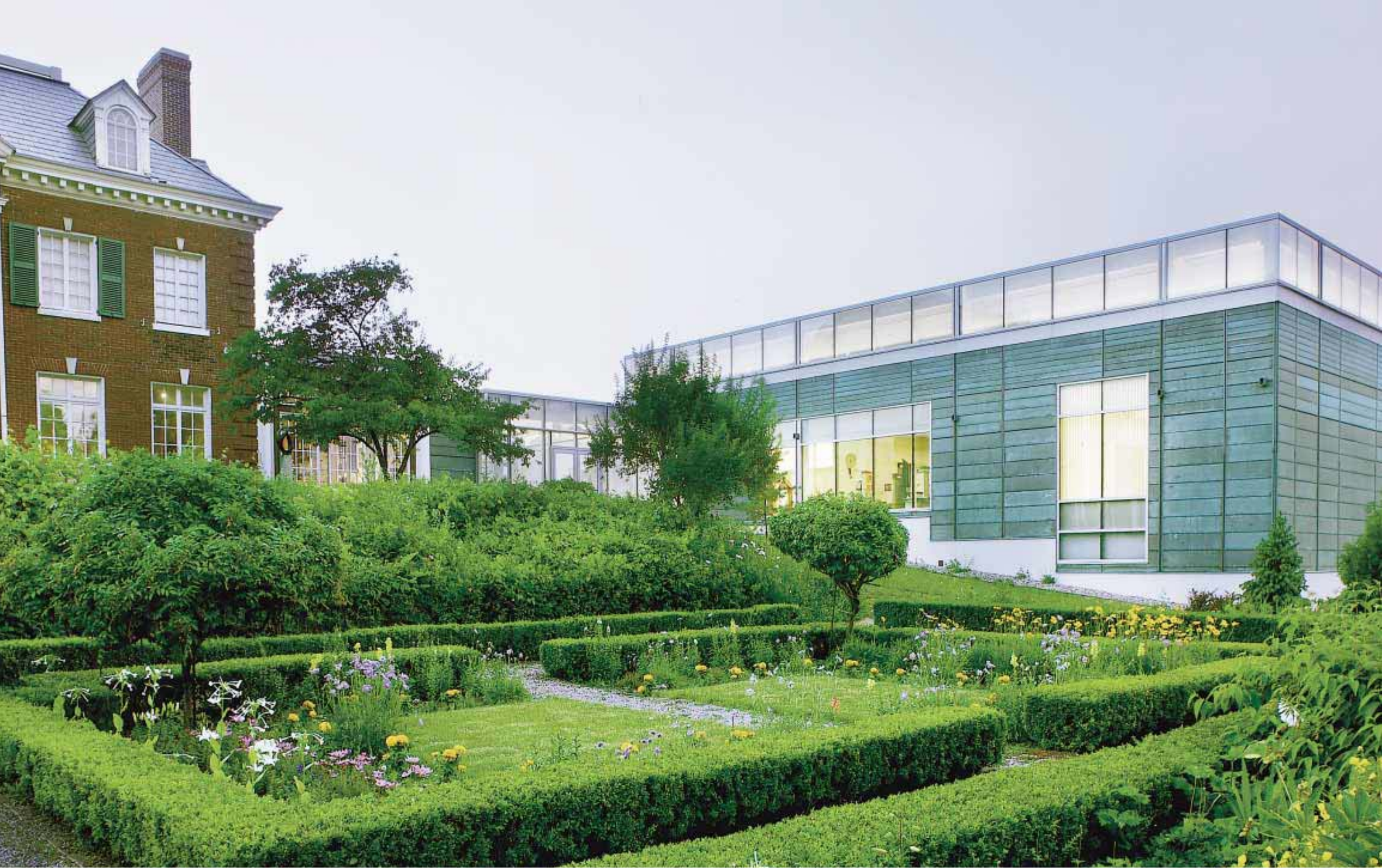


Beha's 40,000-square-foot expansion gave coherence to the existing grouping of buildings by enlarging the lobby in the 1938 building and by adding new wings for galleries (left in site plan, opposite, and this page) and for administration and studios (right in site plan). The structures are steel-framed with an elegant skin of red prepatinated copper on a stone base (above and right). As project architect Peter Sugar, AIA, says, "We wanted to echo the industrial background of the area, but not with just plain brick."

Saginaw Art Museum, Saginaw, Michigan

Almost a hundred years after Charles Platt designed the Ring Mansion in 1904, his grandson, also named Charles Platt, returned to the Saginaw, Michigan, site, owned by the Saginaw Art Museum. His New York firm, Platt Byard Dovell White, had won the commission for an 18,000-square-foot addition of gallery and education spaces. The Georgian brick house's two flanking wood pavilions inspired the team, which included architect of record Wigen Tincknell Meyer, to extend them by two larger lateral wings clad in prepatinated copper. The architects retained the symmetry of the building to embrace the Italian-style garden, originally designed by the elder Platt. The entrance remains at the house, allowing visitors to step back into 1904 before progressing to the modern era. The architects' $7 million budget for the addition resulted in simple interior finishes and an exposed ceiling with a steel-framed structure. Natural light enters the gallery via skylights topped by a triangular monitor, which in turn defines the building's roofline.





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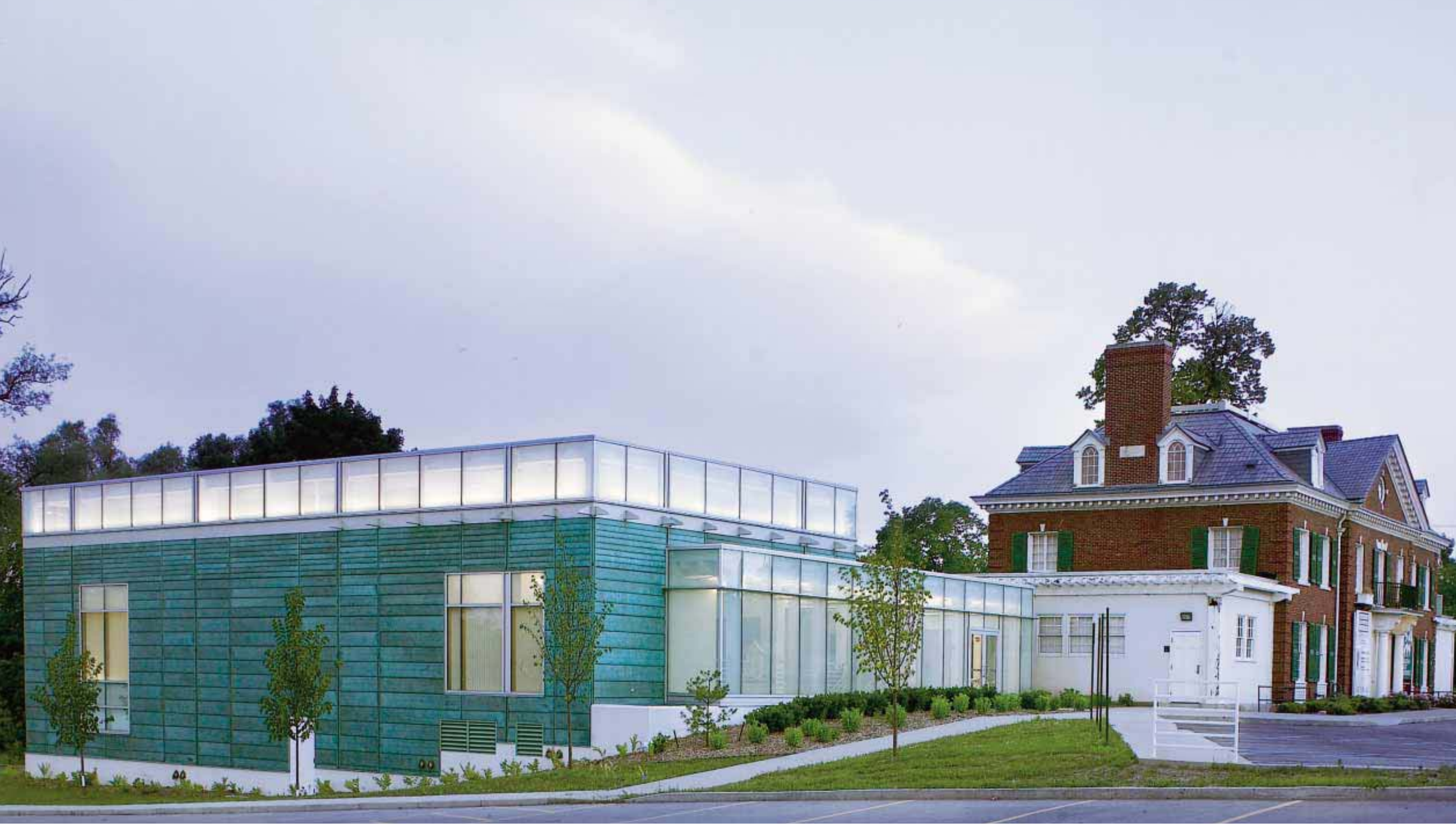
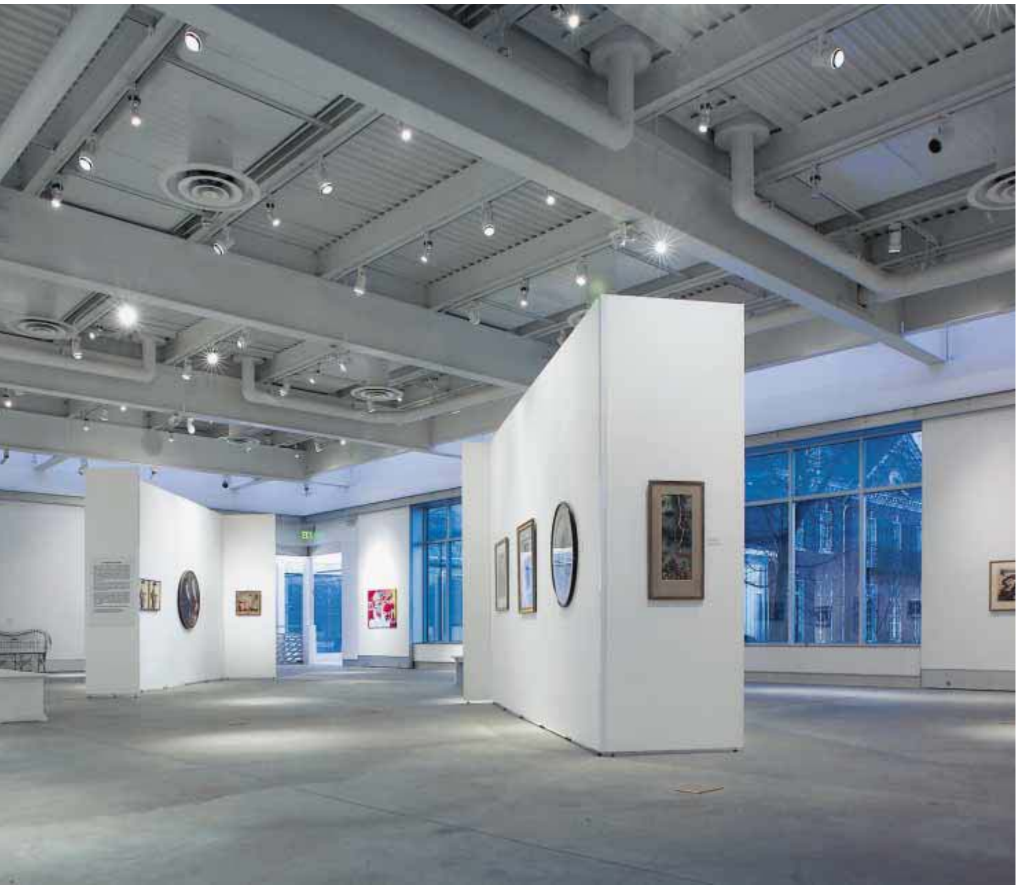
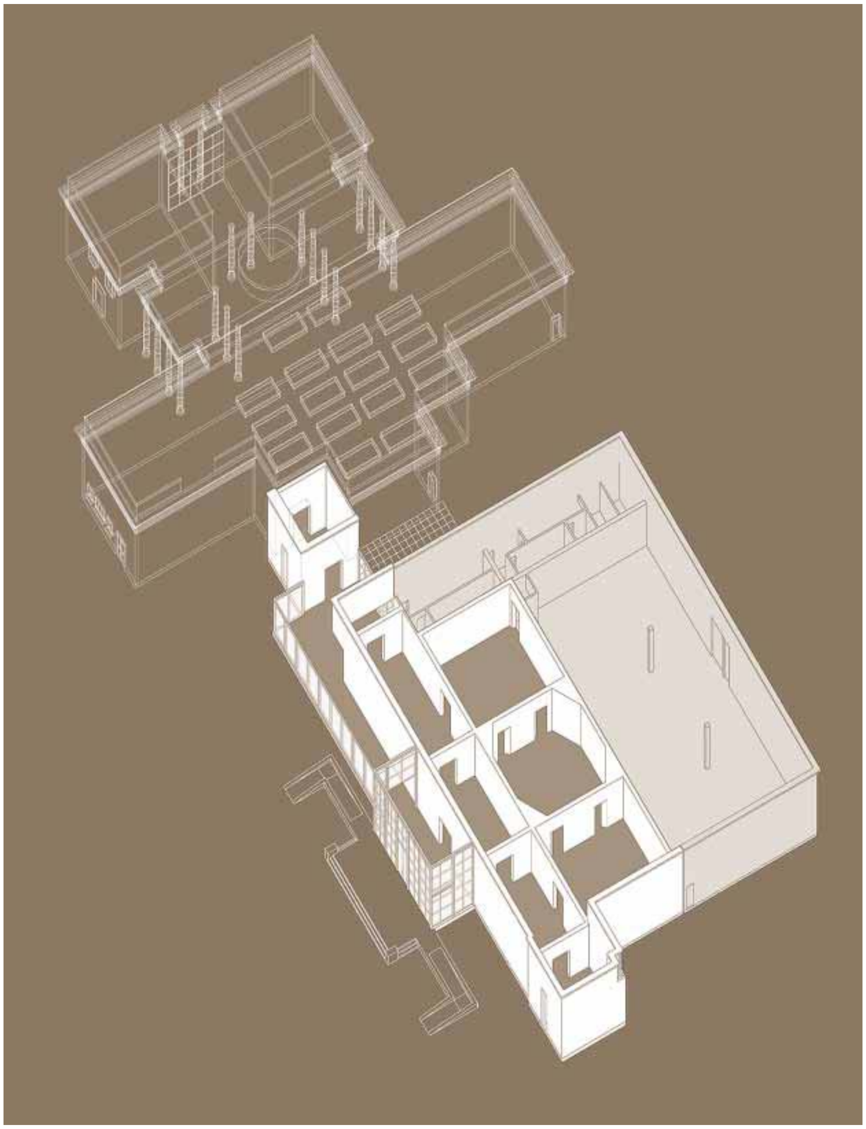


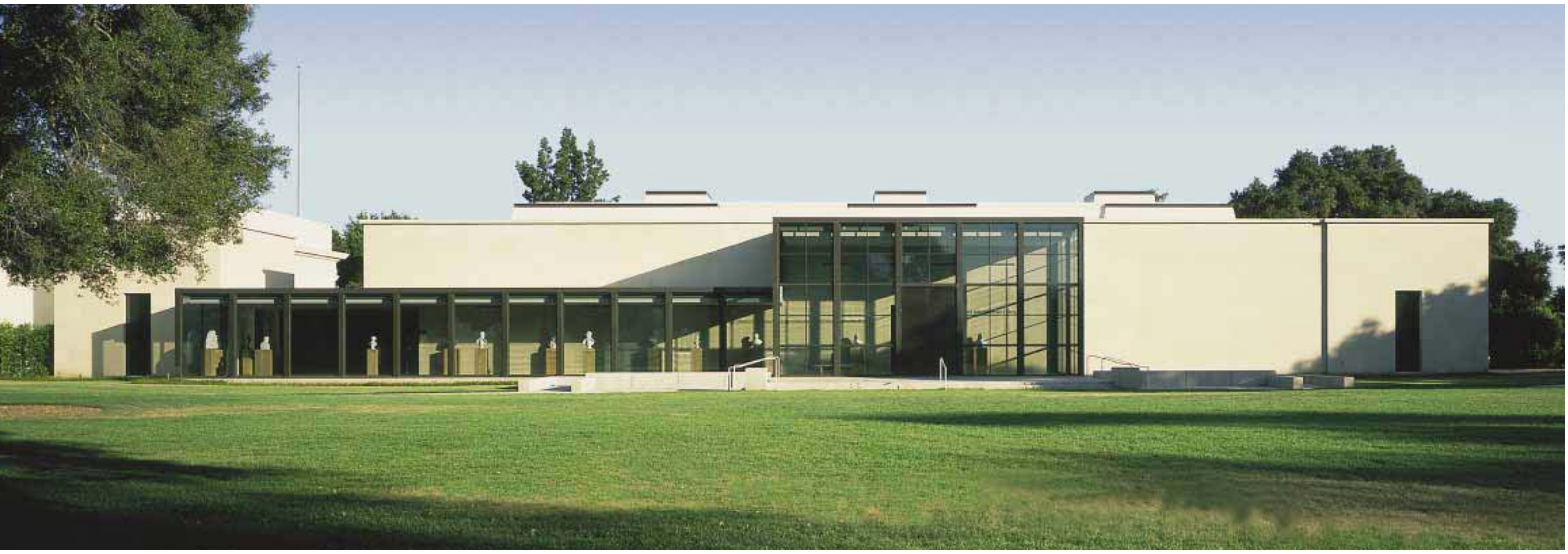


The new wings flank the Ring Mansion (opposite, bottom, at far left) at the center of the plan (opposite, top). The 20-foot-high galleries (left) with exposed ceilings and perimeter skylights allow for flexible art installations. The prepatinated-copper and fritted-glass galleries overlook the existing garden (above and opposite).

At the outset, Frederick Fisher, of Frederick Fisher and Partners, stated to his client, the Huntington Library and Art Gallery, that he would design "a modern building that made reference to the Huntington's Classical-styled historic architecture, but which would not mimic it." The Lois and Robert F. Erburu Gallery shares the grounds of the Huntington's palatial Beaux-Arts library, originally a house, designed by Myron Hunt in 1911, along with the Scott Gallery, also conceived in the Classical style by Paul Gray in 1984.

Fisher's Erburu scheme won over the museum committee by its emphasis on a strong relationship to the landscape via a glass loggia, as well as its powerful enfilade suite of well-proportioned galleries, and the scale of the building with respect to its neighbors. The exterior facade of limestone, glass, and cement plaster encloses the seven differently colored rooms. The architects kept to a stringent budget of $250 per square foot for the 16,000-square-foot addition, using a steel frame and stud structure on a concrete mat. Glass skylights set over deep monitors with fins deflect direct light from the gallery walls.





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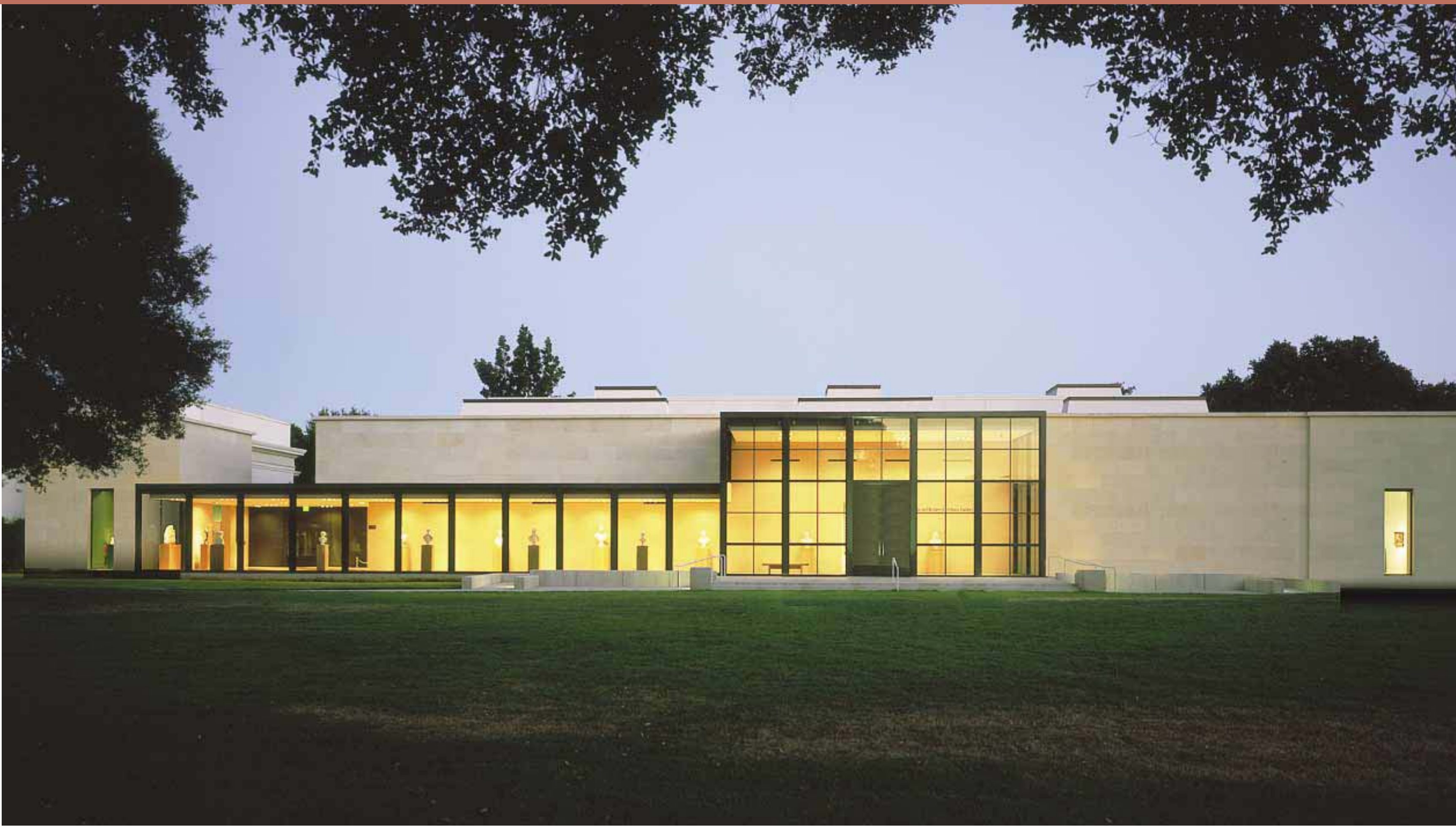
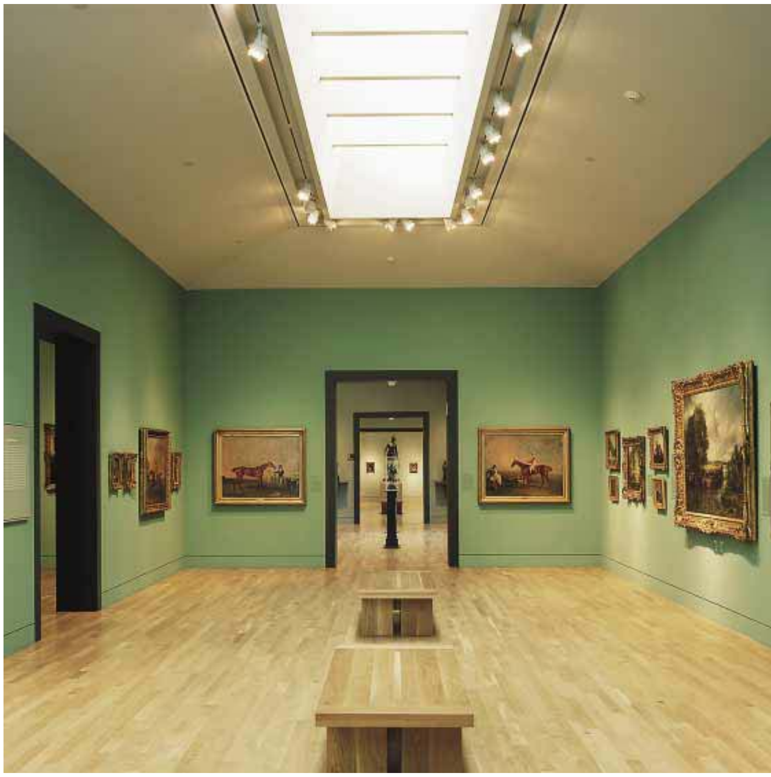
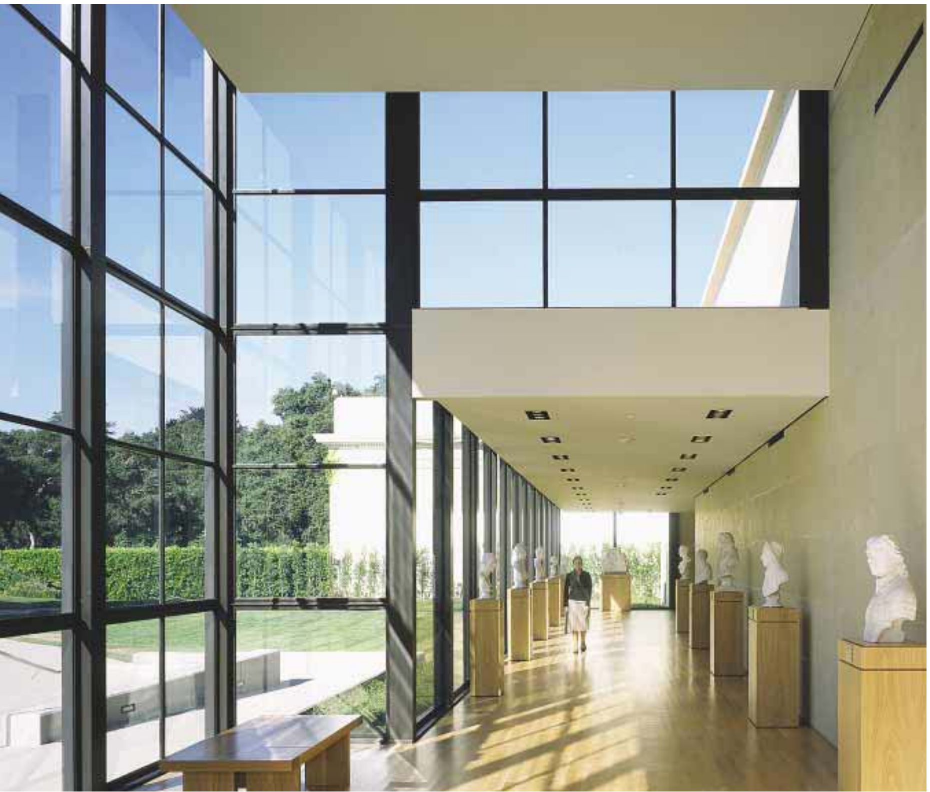


The 16,000-square-foot building (above), clad in limestone, has a glassed-in loggia (below) facing a garden on the grounds of the Huntington Library. Inside the building, seven discrete rooms, one octagonal (opposite, top), display art. The enfilade of roomlike galleries and the toplighting (right) set a traditional tone.





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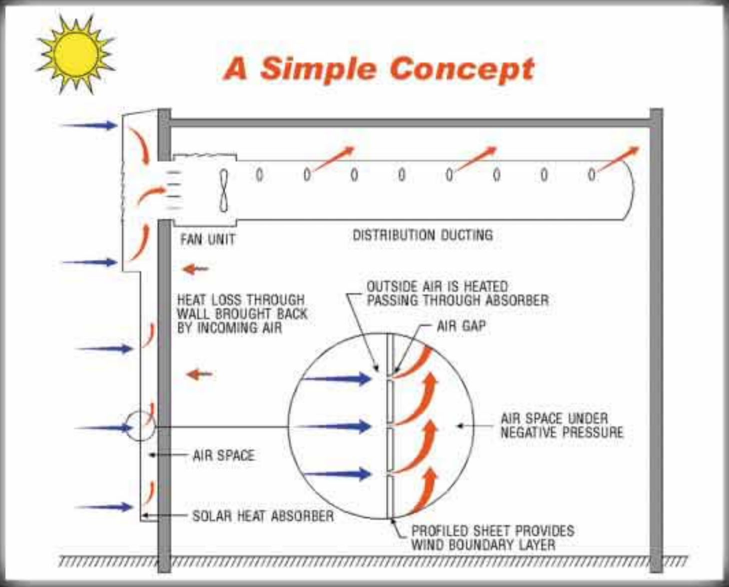
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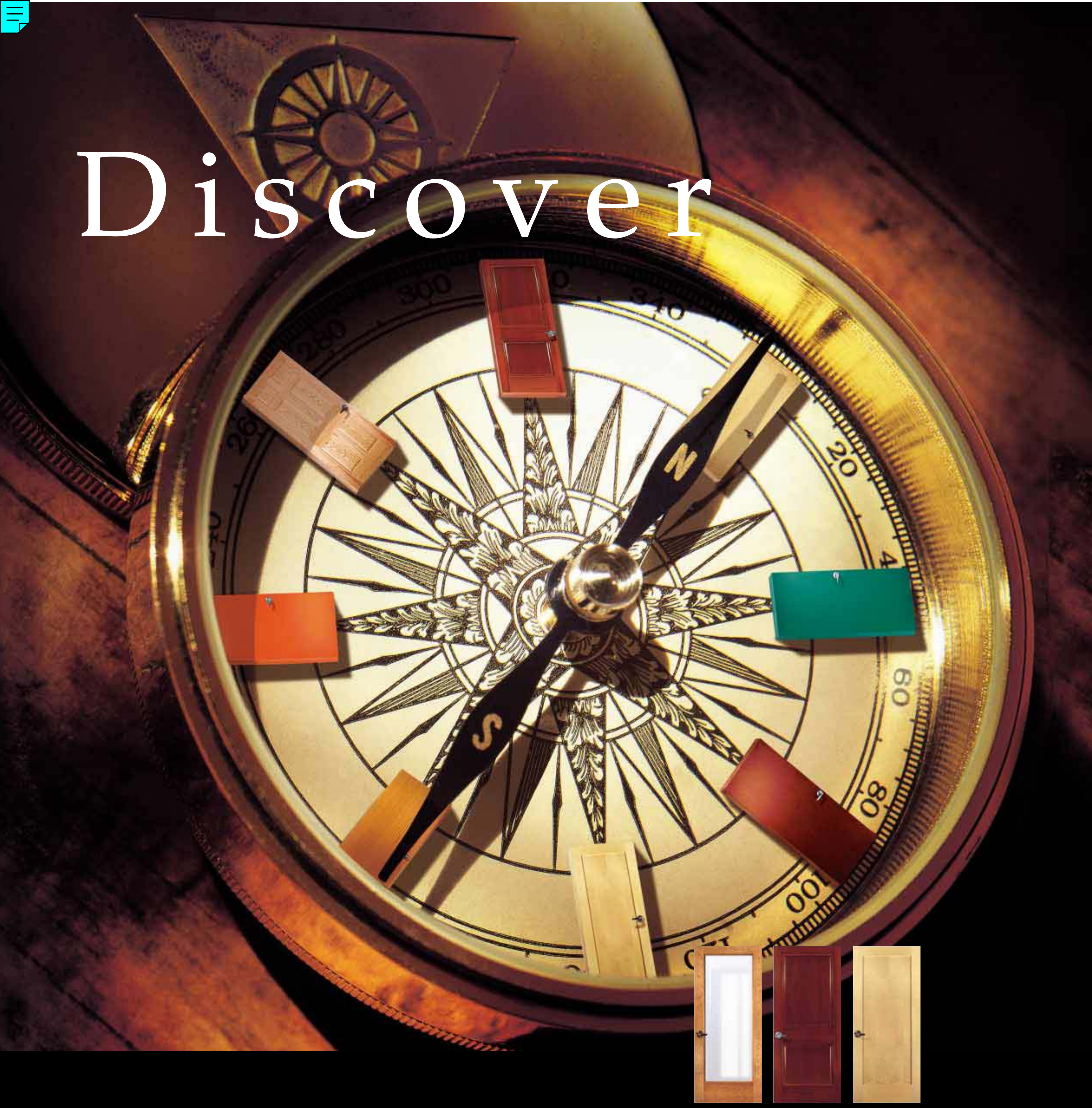

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Frank Lloyd Wright (left), Hilla Rebay (middle), and Solomon Guggenheim (right) examine Wright's museum model in 1945.

Museums and the Maecenas Touch

The outcome of the architecture often depends on who the real client is

By Martin Filler

The reign of the museum as the signal building type in recent American architecture is best explained by the promise of increased prosperity and heightened prestige for any city that erects a sufficiently spectacular cultural attraction. One project in particular—the Guggenheim Museum Bilbao (1997)—can be given credit for the widespread acceptance of idiosyncratic schemes like Santiago Calatrava's Quadracci Pavilion (2001) at the Milwaukee Museum of Art and Daniel Libeskind's forthcoming addition to the Denver Art Museum. Notwithstanding a few extraordinary exceptions, such as Frank Lloyd Wright's Solomon R. Guggenheim Museum in New York (1959), commissioned by the eponymous patron and his manipulative curator, Hilla Rebay, few institutions would authorize such extreme designs before the Guggenheim's current head, Thomas R. Krens, commissioned Frank Gehry to design Bilbao and launched the age of museum mania. Insisting that the Basque government assume all the project's financial risk, Krens avoided interference from his own board and became the scheme's effective patron-client. In doing so, he revived the classic role of architectural Maecenas, while paying none of the bills himself. Krens's autonomous management style may be hard for other museum officials to pull off, but everyone today wants similar results, and the lesson is clear: Committees are death to the singular creative vision.

Another factor in the proliferation of museum architecture is the increasing competitiveness of American trustees, who regard the expansion of their institutions as an unquestionable imperative, like the "grow or die" philosophy cherished by so many corporate C.E.O.s (many of whom are also museum board members). The recent tendency of art collectors to join museum boards or national committees outside their home communities—New York's Museum of Modern Art and Dia Center for the Arts, and London's Tate Modern are particular favorites—increases civic rivalries rooted in old-fashioned boosterism but now

Martin Filler is the architecture critic for House & Garden *and* The New Republic.

PHOTOGRAPHY: © BEN GREENHAUS/DONALD GREENHAUS

Louis Kahn (left in photo, near left) met the right client in Richard Fargo Brown (right), resulting in the spectacular success of the Kimbell Art Museum (far left) in Fort Worth (1972).

Patron Paul Mellon (left in photo, left) stands in the East Building of the National Gallery of Art in Washington, D.C. (1978), with director J. Carter Brown (middle) and the museum's architect, I.M Pei (right).

Dominique de Menil (above, with her husband, John) was patron and client for Renzo Piano's Menil Collection (left and above left) in Houston (1987).

acted out in the international art world. In cities with more than one museum, social rivalries—often between supporters of a traditional and a Modern art museum—can affect the choice of architects. For example, it was hardly surprising that for its addition to Edward Larrabee Barnes's Minimalist building for the Walker Art Center in Minneapolis (1971)—bastion of hipness under the directorship of Kathy Halbreich—the museum gravitated to Jacques Herzog and Pierre de Meuron, whose work is as trendy as it is intriguing. The Minneapolis Institute of Art's addition by Michael Graves, set to open in 2006, is just as resolutely unhip. Graves's Postmodern Classical composition was judged appropriate for the museum's originally Beaux-Arts structure by McKim, Mead and White (1915).

Surprising reversals in taste sometimes become apparent only after the fact. Believing that foreign must mean better, the San Francisco Museum of Modern Art (SFMOMA) chose Mario Botta of Switzerland to design its new building (1995), yet only a decade later that rigid scheme seems at odds with the institution's assertively contemporary direction. (Botta's runner-up was the pre-Bilbao Frank Gehry, at the time deemed too Californian by the internationally ambitious board. Today his rejection seems beyond ironic.) Now SFMOMA has been outdone at home by Herzog & de Meuron's de Young Museum (page 104). Long dismissed by San Francisco's contemporary art crowd as a mishmash of unrelated collections, the de Young's holdings have been pulled into focus by Herzog & de Meuron's ingenious parti. It is far superior to the firm's Walker design—perhaps because a new building offers more freedom than an addition, or because the de Young's budget was almost double the Walker's, or because the idyllic Golden Gate Park setting trumps the Walker's drab site along a busy highway. But the decisive difference may have been that the de Young's director, Harry S. Parker III, had to deal with strong community opposition, which Halbreich did not, and the ensuing struggle actually improved the project.

Today's cultural benefactors seem most motivated by a fear of being left behind in the great museum building rush. Less clear are the specific factors that lead to a successful outcome, and the magic formula that guarantees a masterpiece remains an elusive, if not unattainable, goal. Nonetheless, the quest goes on, beginning with the now-obligatory grand tour of museums considered admirable—or cautionary—examples of the building type. This practice was in place as early as 1964, when, in preparation for the Fort Worth museum endowed by the will of the Texas tycoon Kay Kimbell, his widow, Velma, went to see museums in London, Paris, and Rome. Even sophisticated art collectors can have trouble reading plans on paper, so visiting completed galleries is essential.

No matter how far museum selection committees roam, they tend to be impressed by the same few favorites, and all roads lead to Texas. Inevitably topping the list is Louis Kahn's Kimbell Art Museum in Forth Worth (1972), generally considered the finest museum building of the 20th century, followed closely by Renzo Piano's Menil Collection in Houston (1987). Their histories offer insights into the crucial give-and-take between architect and client, the heart of a successful collaboration.

A truism of architecture is that great buildings require great clients, but it is first necessary to identify who exactly the client is. In a museum commission, that might be the institution's director, the chairman of the board, the head of the building committee, or the principal donor. At the Kimbell, the client was the museum's founding director, Richard Fargo

PHOTOGRAPHY: (CLOCKWISE, FROM TOP LEFT) © EZRA STOLLER/ESTO; BOB WHARTON; HICKEY-ROBERTSON; RICHARD BRYANT/ESTO (MENIL COLLECTION, TWO); COURTESY NATIONAL GALLERY OF ART, WASHINGTON, D.C.

Thomas Krens, director of the Guggenheim Foundation (left in photo, below) stands with Frank Gehry, architect for the Guggenheim Bilbao (1997) (left two).

Donors Joey and Toby Tanenbaum (left) walked away from Frank Gehry's initial scheme for the expansion of the Ontario Art Gallery in Toronto (far left and below), but returned to the project after it was modified.

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Brown (1916–79), who, as architectural historian Patricia Cummings Loud points out in *The Art Museums of Louis I. Kahn* (1989), was responsible not merely for selecting the architect, but for defining the very ethos of the new institution. The Kimbell board gave Brown a degree of creative autonomy perhaps unequalled in the annals of museums, and although the Kimbell was generously funded through its patron's bequest, Brown's strong personal vision and ability to deal with the often exasperating Kahn made all the difference.

Brown's program for the Kimbell called for it to convey a feeling of "warmth, mellowness, and even elegance." He knew what he wanted and how to express it, in large part because he had been through it all before. As director of the Los Angeles County Museum of Art, Brown wanted Mies van der Rohe to design its new building, but the board vetoed him and hired William Pereira and Associates. Though disappointed, Brown worked closely with the firm and learned from the experience.

At the Kimbell, Kahn started out only third on Brown's short list, behind Marcel Breuer and Mies. Yet, as Brown learned more of Kahn's belief in the primacy of light, he knew he'd found a kindred spirit. Brown persistently oversaw and evaluated every detail, cajoling and calming, advising and consenting with the architect as he slogged through three successive versions of the scheme, battling with the contractor, and working with an engineer (August Komendant) who could create those now-famous cycloid vaults. The Kimbell, timeless and serene, gives no hint of its turbulent birth, or the pivotal role of its heroic and largely unremembered client.

Three months after the Kimbell's ground breaking, Kahn was chosen to design the Yale Center for British Art (1977), for a site in New Haven directly across from his first major completed work, the Yale University Art Gallery (1953). Although the philanthropist Paul Mellon gave the new building and its splendid collection to his alma mater, he gladly ceded control to the de facto client, Jules Prown, a Yale art history professor, who chose Kahn and, as Brown did at the Kimbell, led the architect through three lengthy iterations of the scheme.

Yet Kahn took to heart Mellon's predilection for domestically scaled museum settings, albeit with a size more akin to that of an English stately home. Interestingly, Mellon later admitted to me he found Kahn "a little crazy," and much preferred his other major museum benefaction, I.M. Pei's East Building (1978) at the National Gallery of Art in Washington.

In 1972, Kahn began working on a personal gallery for the French-born Houston arts patrons John and Dominique de Menil, but within two years both men were dead. De Menil's widow gave the commission to Renzo Piano, who had restructured buildings near Paris for her family's Schlumberger oil equipment company and whose Centre Georges Pompidou in Paris (1977), designed with Richard Rogers, had been hailed as a new paradigm for the museum (though functional deficiencies and shifts in fashion have rendered its subsequent influence negligible).

When it opened, Piano's Menil Collection (1987) was immediately praised as a worthy sequel to the Kimbell. Despite obvious stylistic differences, both museums are alike in their human scale, skillful handling of natural light, and sympathetic display of art. The Menil remains the foundation of Piano's career as today's most sought-after museum architect. Although subsequent clients must always expect to get a building equal to the superlative Menil Collection, that hasn't happened, perhaps because

With the Nasher Sculpture Center (top two) in Dallas (2004), the patron Raymond Nasher (right in photo, far right) worked closely with architect Renzo Piano (left in photo). Architect Rafael Viñoly (right in photo, right) and Nasher (left in photo) regard Viñoly's Museum at Duke University (bottom two) in Durham, N.C. (2005).

none of them is Dominique de Menil. In contrast to Mellon, who loathed turmoil and distanced himself from Kahn's creative agony, de Menil embraced the dual role of patron and client. Legendary for her rigorously refined taste, she personified Coco Chanel's famous dictum that "elegance is refusal." Nevertheless, she wasn't easy to work with. As Piano recalls, "Dominique was the most stubborn woman I have ever met in my life, but also one of the most intelligent." On at least one occasion, Piano was grateful for de Menil's stubbornness. "When I presented the model to Dominique and her children," he recalls, "one didn't like this, another didn't like that, and by the time we went around the room, the whole thing was in shreds. Then suddenly, Dominique slammed her hand down on the table, shouted 'Shut up!'—and approved the design as it was."

Good clients know what they want; great clients also know what they don't want. De Menil was adamant that her museum be free of glitzy materials and self-aggrandizing gestures, but it wasn't a process of elimination: Piano followed her wishes from the outset. The building's gray-stained wood cladding, black-stained pine flooring, and absence of dedicatory inscriptions seem Zen-like in their humility. Beyond that, this experienced collector knew that the illumination of the galleries was paramount. The hallucinatory clarity of light at the Menil—the result of painstaking effort by Piano and his engineering alter ego, Peter Rice—feels as right for its Modern and tribal collections as the Kimbell's silvery glow does for its more traditional artifacts.

Piano's Beyeler Gallery near Basel (1997), though also highly admired, is the perfect illustration of what a difference a client can make. The Beyeler's bucolic setting, graceful proportions, and subtle toplighting are all beyond praise. Nonetheless, after the Menil's exalted austerity, the Beyeler's red stone cladding and rich wood veneers seem too showy. This antithesis is telling. Ernst Beyeler, a self-made art dealer, envisioned his museum as a capstone to his worldly success. Dominique de Menil, daughter of privilege, regarded her museum as a touchstone for spiritual values that money can't buy, though of course she needed a fortune to do so. In both cases, Piano's designs reflect his client's self-image without reservation.

The museum client who comes closest to de Menil's exacting standards since her death is her fellow Texan Raymond Nasher. Renzo Piano's Nasher Sculpture Center in Dallas (2004) is seen by many as a sequel to the Kimbell and de Menil. As a real estate developer, Nasher was not known for perfectionism. He and his wife, Patsy, began buying sculpture—some of which he used to adorn his shopping centers—because it seemed a better bargain than painting, but the collection grew in quality to become one of the best in private hands. For the scheme he has come to view as his memorial, Nasher lavished millions on perfectionist refinements—removing ventilation equipment from the sculpture center's roof to preserve its arching profile, adding a hydraulic lift for below-grade truck access that precludes ugly street-level loading docks.

Yet Nasher served only as patron, not client, for Rafael Viñoly's new Nasher Museum of Art at Duke University in Durham, North Carolina (2005), a scheme nowhere nearly as fine as the Dallas jewel its patron-client so lovingly polished. The Nasher Sculpture Center is a bid for immortality; the Nasher Museum is a gift from a grateful alumnus.

The client factor looms larger when museums designed by the same firms at the same time turn out very differently. That was true of

PHOTOGRAPHY: © (CLOCKWISE, FROM TOP LEFT) TIMOTHY HURSLEY (NASHER SCULPTURE CENTER, TWO); COURTESY NASHER SCULPTURE CENTER; BRAD FEINKNOPF (NASHER MUSEUM OF ART, TWO); COURTESY NASHER MUSEUM OF ART

Jacob, Lord Rothschild (above) strongly supported Venturi, Scott Brown and Associates' Sainsbury Wing (1991) for London's National Gallery (left two).

Herzog & de Meuron revved up Minneapolis with its addition (below) to the Walker Art Gallery (2005), where it worked closely with museum director Kathy Halbreich (left).

PHOTOGRAPHY: © (COUNTERCLOCKWISE, FROM TOP LEFT) MATT WARGO (SAINSBURY WING, TWO); AP PHOTO/TIM GRAHAM PICTURE LIBRARY; PAUL WARCHOL; COURTESY WALKER ART CENTER

Venturi, Scott Brown and Associates' (VSBA) Seattle Art Museum (1991) and its Sainsbury Wing at London's National Gallery (1991). The British commission was fraught with conflict well before Robert Venturi and Denise Scott Brown were hired in 1986, and they received steady support from the Sainsbury brothers as patrons and National Gallery board chairman Jacob, Lord Rothschild as client, united in their determination that a hostile press not derail the scheme. Although it's been alternately hailed as a masterpiece and denounced as a travesty, the Sainsbury Wing has grown on the public (as have other controversial VSBA designs), and its majestic sequence of galleries continues to impress.

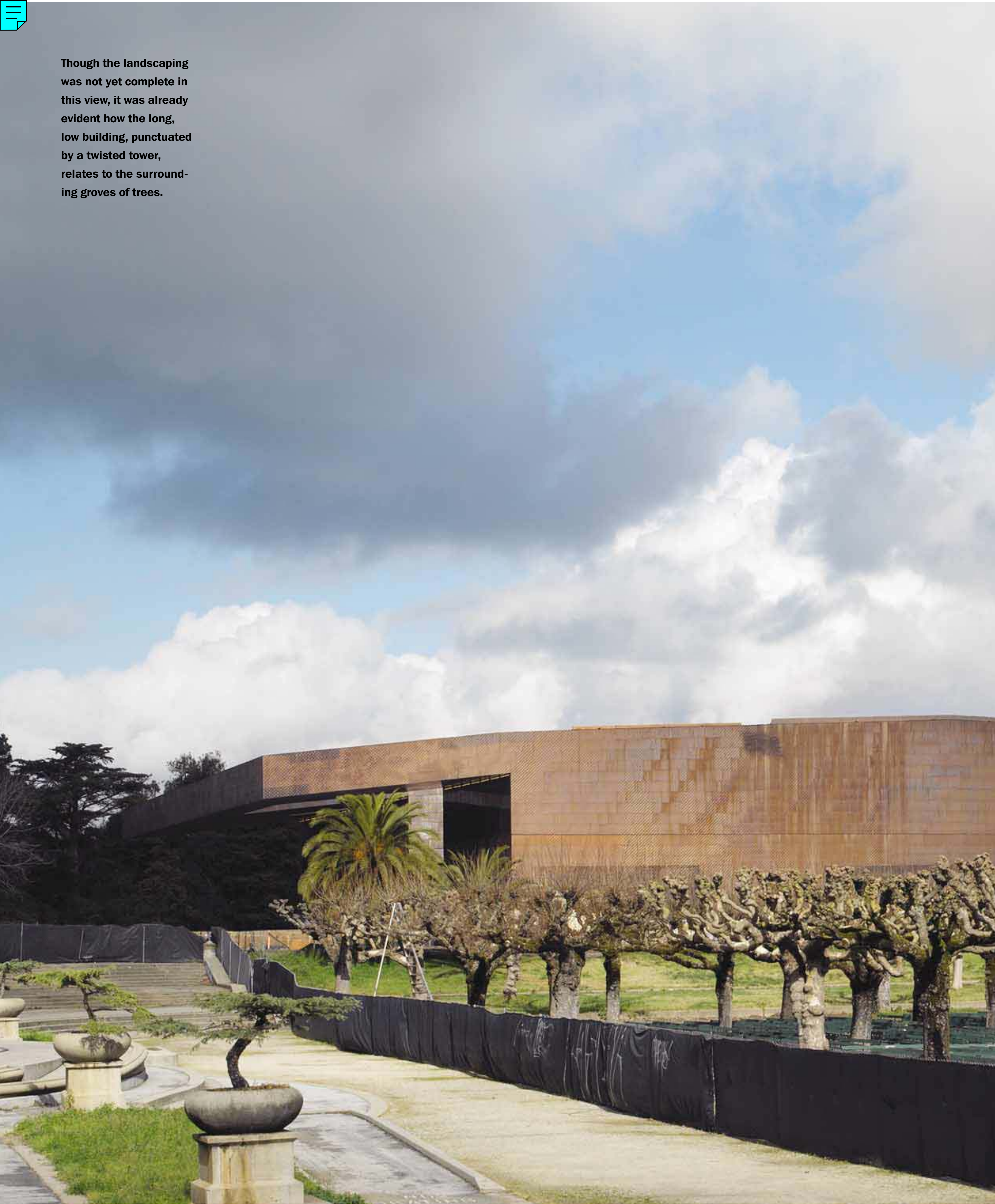
A member of the Seattle Art Museum building committee later confessed to me that his board made a fatal mistake when it cut VSBA's fee to the percentage typical for office buildings, like those some of his fellow trustees commissioned. The materials, detailing, and workmanship at Seattle fell well below the quality that the bigger London budget supported. And 15 years later, the exuberantly decorated exterior of the Seattle museum hasn't aged nearly as well as the National Gallery addition.

If Mellon, de Menil, and Nasher epitomize the very best in museum patronage, then others display much less noble motives. After Arata Isozaki began his Los Angeles Museum of Contemporary Art in 1981, one museum trustee who had opposed his selection arrived at a board meeting with an architect who had prepared an alternative design. The trustee demanded that Isozaki be replaced by his protégé, or he'd withdraw his financial support. Fortunately, the bully was rebuffed, and the job went on to a happy conclusion. This year, the Canadian tycoon Joey Tanenbaum and his wife, Toby, walked away in protest over Frank Gehry's scheme for expansion of the Ontario Art Gallery in Toronto, but returned when he modified it.

There never will be a foolproof formula guaranteeing great architecture. But the case histories of the best modern museum buildings have several things in common. Of course the choice of architect is paramount, but that alone is not enough: The same designer can perform quite differently depending on the client, budget, or other factors. Timing is everything.

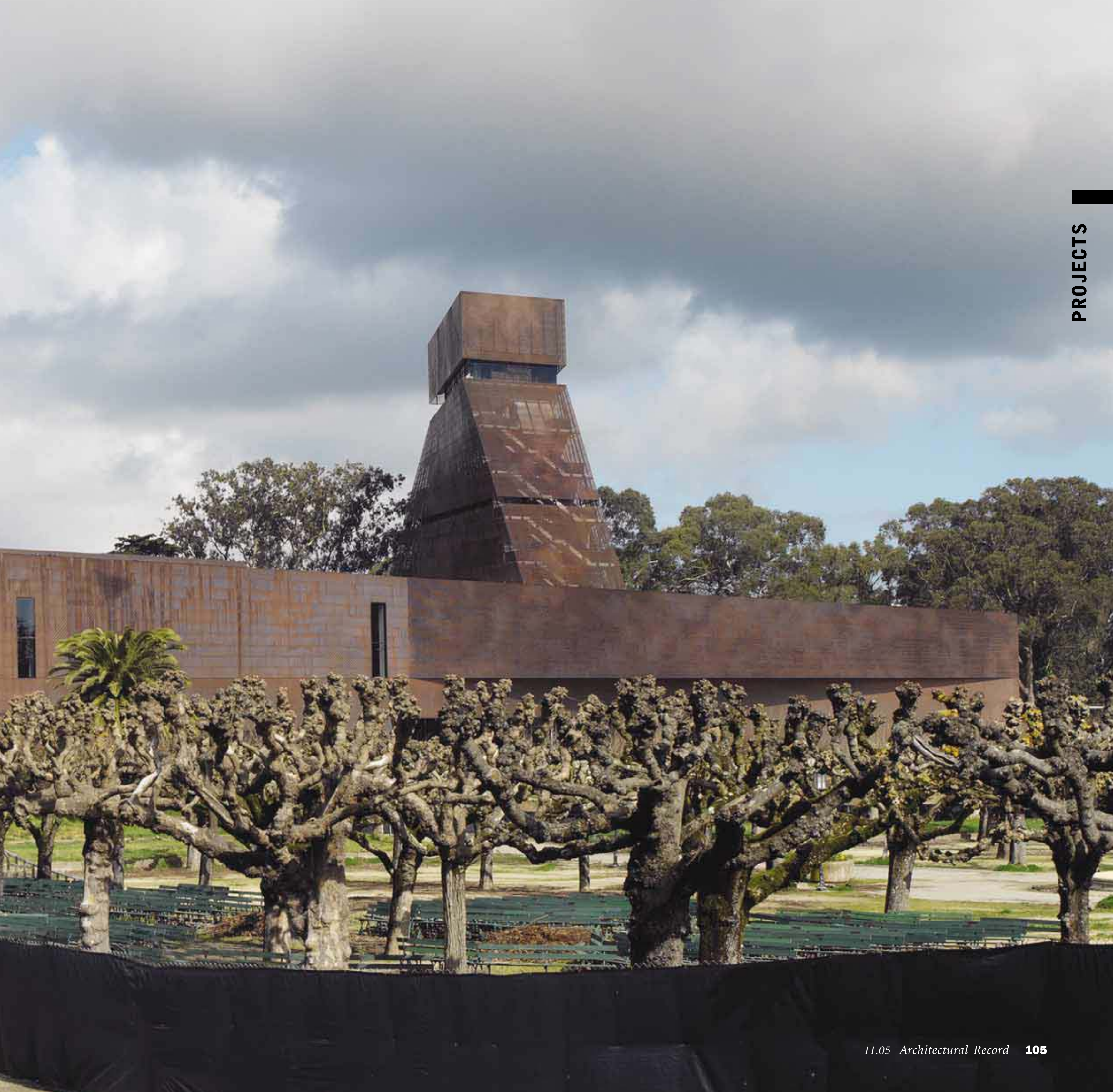
When Hilla Rebay prodded Solomon Guggenheim into hiring Frank Lloyd Wright in 1943, he was at the end of his great late resurgence that produced Fallingwater (1937), Taliesin West (1938), and Johnson's Wax (1939). By the time the Guggenheim was completed in 1959, it was clear that Wright's best work was far behind him. When Krens hired Gehry for the Guggenheim Bilbao in 1991, the architect was a known quantity. Yet the simultaneous emergence of new computer technology that enabled Gehry to make his epochal breakthrough had not been predicted.

Most important seems to be the presence of one strong, committed individual—whether client, patron, or a combination of both. He or she must have the financial backing, executive autonomy, aesthetic understanding, organizational skills, and patient temperament needed to see a project through all the difficult challenges that arise during the design and construction process, especially when the scheme is innovative and the aesthetic standard is high. This of course is easiest with a single patron client, but even groups can follow suit. My advice to museum boards: Forget all the committees, pick the strongest advocate among you (as long as he or she is not a real estate developer, but that is another story), step aside, and speak through your appointed mediator with one voice united. And don't forget to write your checks. ■

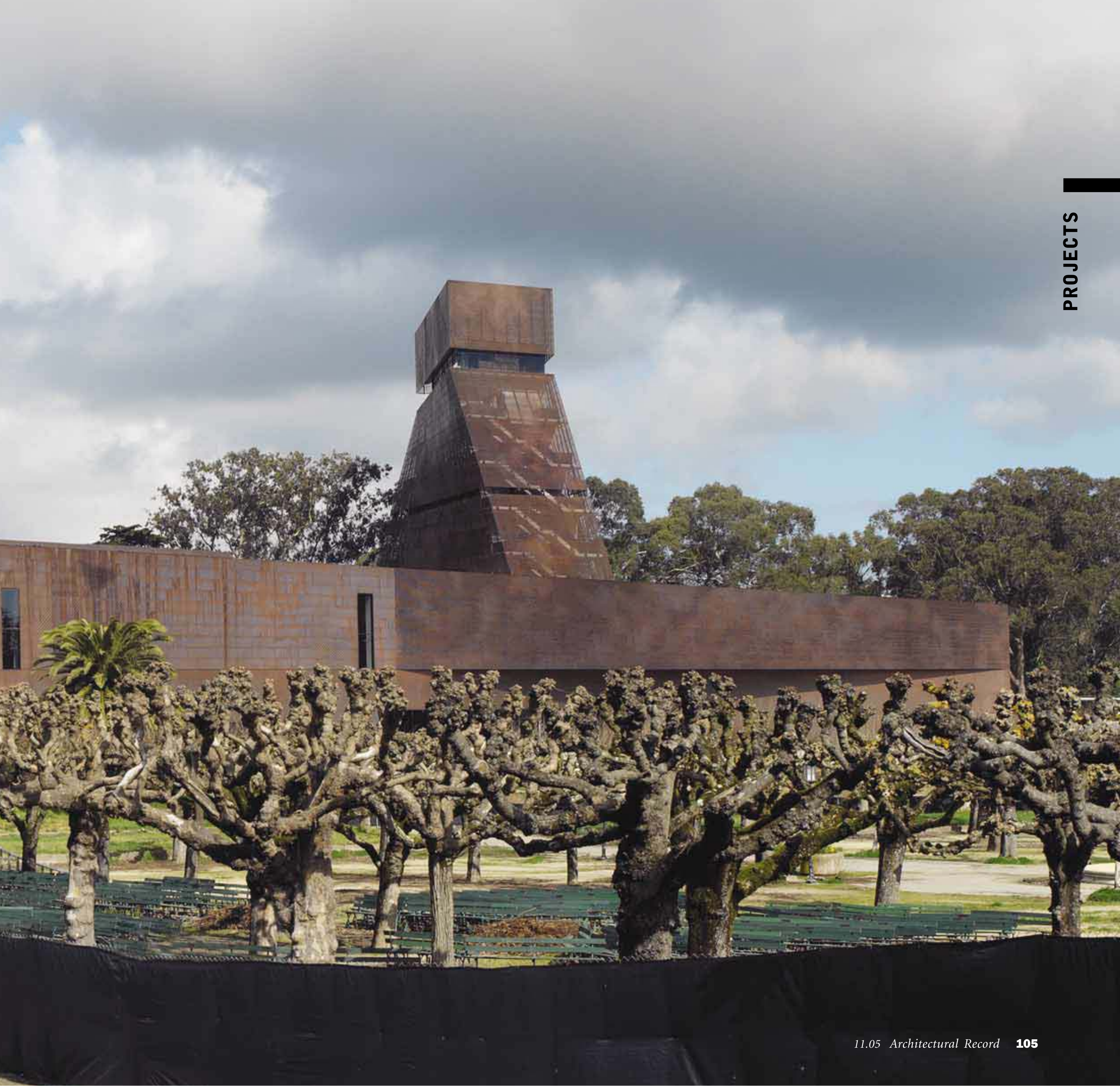


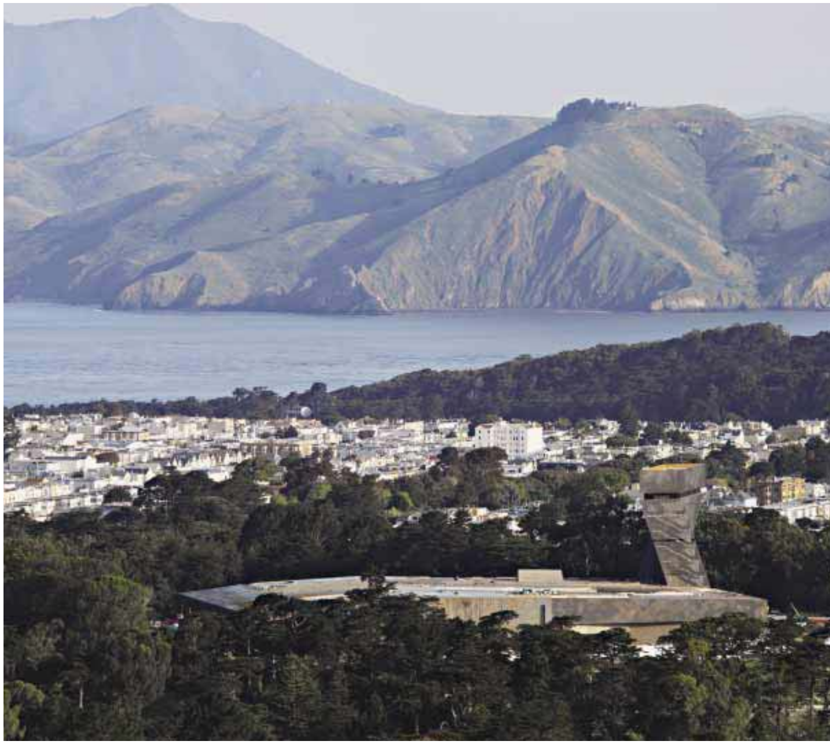
Though the landscaping was not yet complete in this view, it was already evident how the long, low building, punctuated by a twisted tower, relates to the surrounding groves of trees.

For San Francisco's **DE YOUNG MUSEUM,** **Herzog & de Meuron** create a new building with a sensual copper skin that will evolve over time



For San Francisco's **DE YOUNG MUSEUM,** **Herzog & de Meuron** create a new building with a sensual copper skin that will evolve over time





By Sarah Amelar

A fine, jagged crack in the stone pavers leads into the de Young Museum's entry court. At first you wonder, "Is the craftsmanship so shoddy that the place is falling apart?" But it soon becomes apparent that the crevice or fault—a reference to the area's seismic history—is willful. Part of a site-specific, permanent installation by artist Andy Goldsworthy, the meandering fissure gives an inkling of how well art fits into this new building by Swiss architects Herzog & de Meuron.

In many ways, the de Young's subtlety reveals itself gradually. Like a chameleon's skin, the structure's copper sheathing transforms itself constantly. As fog rolls in and out and sunlight flickers, this outer layer's character shifts fleetingly from sheer to opaque, with glints of orange giving way to shades of brown. But beyond momentary fluctuations in light and atmosphere, the cladding has also begun registering long-term effects of time and the elements—turning the copper brown, black, and eventually, green.

"We wanted a material that would be sensitive to—and actually express—the fact of change," says Jacques Herzog of Herzog & de Meuron. In earlier projects, such as the Ricola Storage Building and Remy Zaugg Studio, the firm had deliberately devised roof structures that invite rainwater to leave its mark on exterior concrete walls. But at the de Young, the architects went further. As Herzog adds, "We intentionally attacked the metal to exploit its inherent tendencies." Across every elevation, the designers left certain areas of the copper surface smooth, rendered others bumpy or dimpled, and breached yet others with perforations (or with a combination of the above), enhancing the material's propensity to oxidize—and do so with poetic unevenness. Herzog anticipates that the mature patina, which may take a decade to develop, will not acquire a uniform Statue of Liberty cast, but multiple shades of green dappled with browns and black that blend with the surrounding trees. By the building's opening day, rain, salt, and fog had already given the cladding subtle streaks of purple, sage, russet, and sepia.

In exposing the forces of nature as a key player, the architects not only defer to the beauty of the site—right in the middle of Golden Gate Park—but also respond to the history of the de Young and the longstanding controversy over the museum's presence in this 1,000-acre park.

As far back as 1894, when the institution's original building was erected as part of a Midwinter Exposition, the notion of a permanent museum here generated public and political resistance. Once the exposition ended, the de Young was ultimately permitted to remain, only to endure fatal damage in the earthquake of 1906. The replacement on the same site, a piecemeal accretion of six adjoining buildings in Spanish Colonial Revival style, completed between 1916 and 1955, succumbed to yet another major temblor: the Loma Prieta earthquake, which struck on October 17, 1989.

The seismically impaired structures—an architecturally unremarkable compound, stripped of any distinguishing ornament some 50 years earlier—already suffered from cramped interior spaces and almost nonexistent heating, cooling, and humidity controls. And the estimated cost of repairs and seismic retrofitting exceeded $70 million. After years of evaluation, the trustees agreed to raze the complex. But the opportunity for demolition sparked renewed hostility toward rebuilding in the park. By 1998, voters had twice defeated city bond issues for public funds to rebuild the de Young on its existing site (with an underground parking garage).

At that juncture—nine years after the Loma Prieta quake—Diane Wilsey, the museum's capital campaign chair for rebuilding, halted the chase for government funds, and assumed the task of raising the full $200 million privately. A journey and selection process led to Herzog & de Meuron. (See sidebar, page 110.) But even with purely private funding, the struggle to realize the building raged on. The 22,500-square-foot tower alone, feared by some as a potential eyesore, required more than 55 meetings with the city.

Into this contentious climate—and blissfully lush landscape—the architects needed to insert 292,000 square feet of program. At first, the team considered turning the museum into a collection of pavilions, strewn within the folie-studded park. Respectfully low-scale, this scheme would have created relatively small footprints amid the greenery, but fickle weather would have made the indoor-outdoor setup impractical for visitors.

That scheme's inspiration had come from not only the idyllic setting, but also the eclecticism of the de Young collections. With Oceanic, Native American, and African cultural artifacts; American 20th Century and Contemporary art; textiles, and more, the mélange had evolved out of a 19th-century attitude toward accumulating curios. Before rebuilding this time, the de Young cleaned house, keeping some of its original mix while making strategic sales and acquisitions to consolidate particular collections.

Herzog & de Meuron ultimately found their solution in a single 292,000-square-foot structure, which embraces the setting, as well as the museum's diverse holdings. Envisioned as an organism with interrelated parts—like a hand with fingers—the scheme unifies, beneath a copper roof and skin, three bands of gallery and circulation space that run side by side, occasionally converging or diverging. The arrangement eliminates hierarchy among galleries (with plenty of bypasses, you need never go through one collection to reach another), allows for contrasting spaces tailored to each collection, and creates opportunities to usher the landscape into the building.

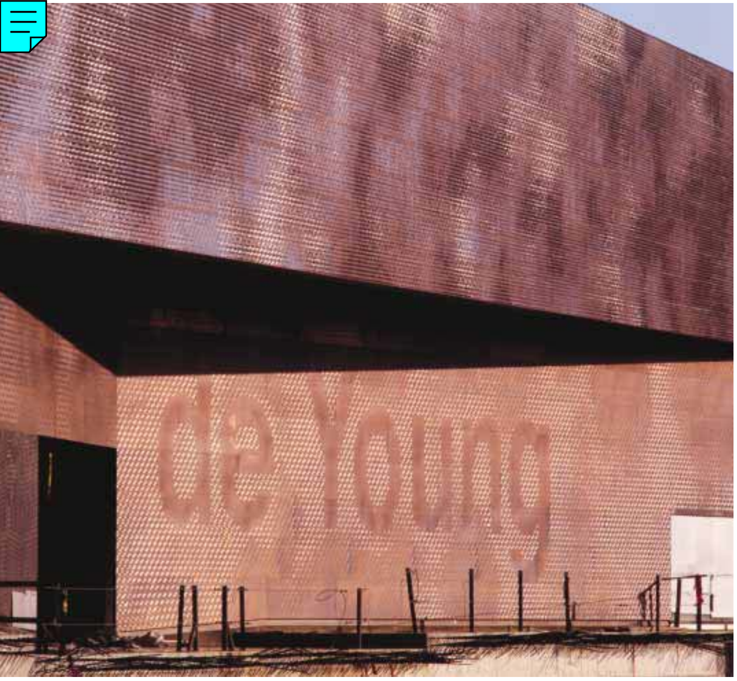
But how to accommodate so many square feet in a single structure without creating a massive intruder in the park? Clearly, camouflage was part of the answer. The sheathing, dissolving visually into light and shadow, mimics the dappled rays filtering through a grove of trees—an effect achieved by projecting abstracted, pixilated photographs of the surrounding tree canopy onto the copper to determine the placement of perforations. (Each of the 7,200 panels, composed with computer assistance, is unique.)

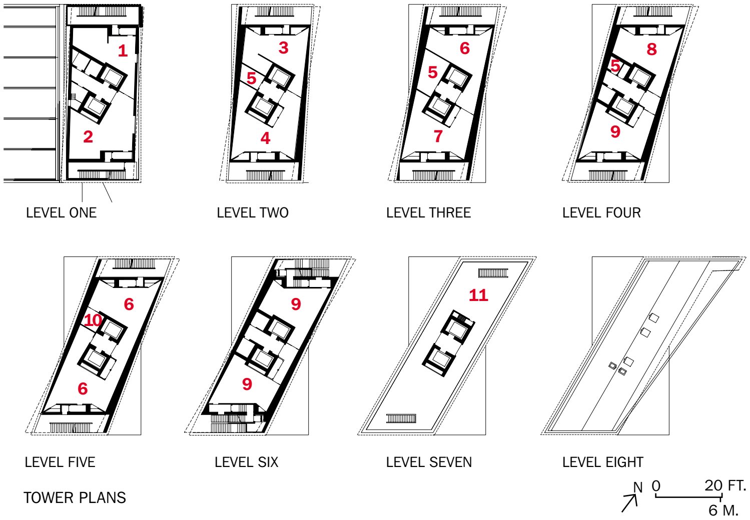
Project: *de Young Museum, San Francisco*

Primary design architects: *Herzog & de Meuron—Jayne Barlow, Béla Berec, Christine Binswanger, Christopher Haas, Jacques Herzog, Roger Huwyler, Thomas Jacobs, David Jaehning, Lisa Kenney, Philipp Kim, Martin Knüsel, Carla Leitão, Mark Loughnan, Jean-Frédéric Luescher, Nickolas Lyons, Dieter Mangold, Ascan Mergenthaler, Pierre de Meuron, Thomas Robinson, Anita Rühle, Mehrdad Safa, David Saik, Roman Sokalski, Bernardo Tribolet, Marco Volpato*

Principal architects: *Fong & Chan*

PHOTOGRAPHY: © NIC LEHOUX, EXCEPT AS NOTED; CORPORATION OF THE FINE ARTS MUSEUMS OF SAN FRANCISCO (FAMSF)/MARK DARLEY PHOTOGRAPHER (OPENING SPREAD AND THIS PAGE)

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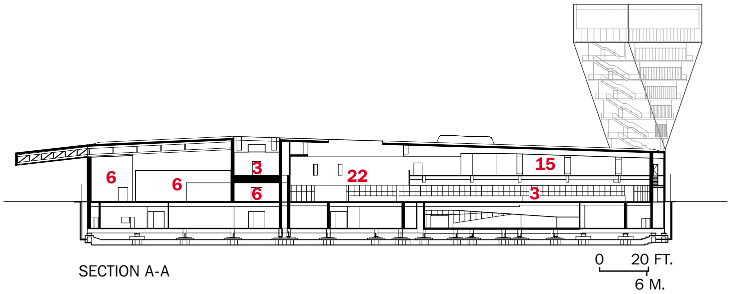
TOWER PLANS

1. *Study center*
2. *Public reading*
3. *Publications*
4. *Volunteer center*
5. *Storage*
6. *Education center*
7. *Docent center*
8. *Artist's studio*
9. *Classroom*
10. *Office*
11. *Observation floor*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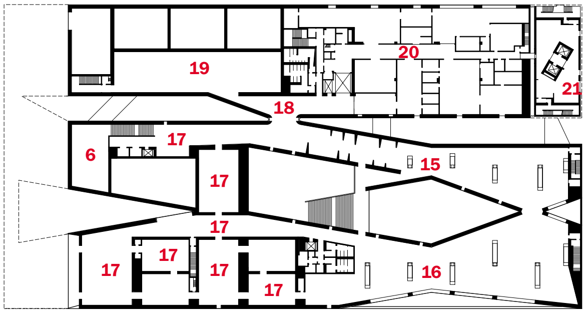
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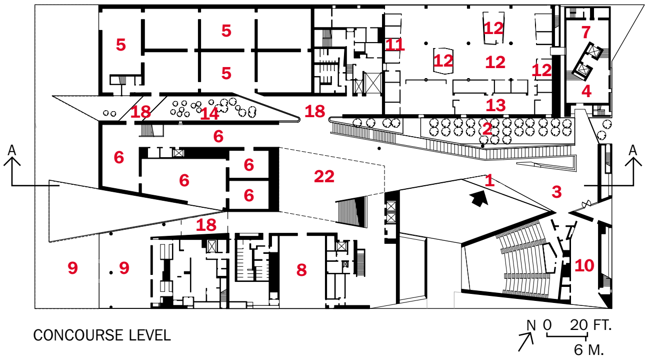
UPPER LEVEL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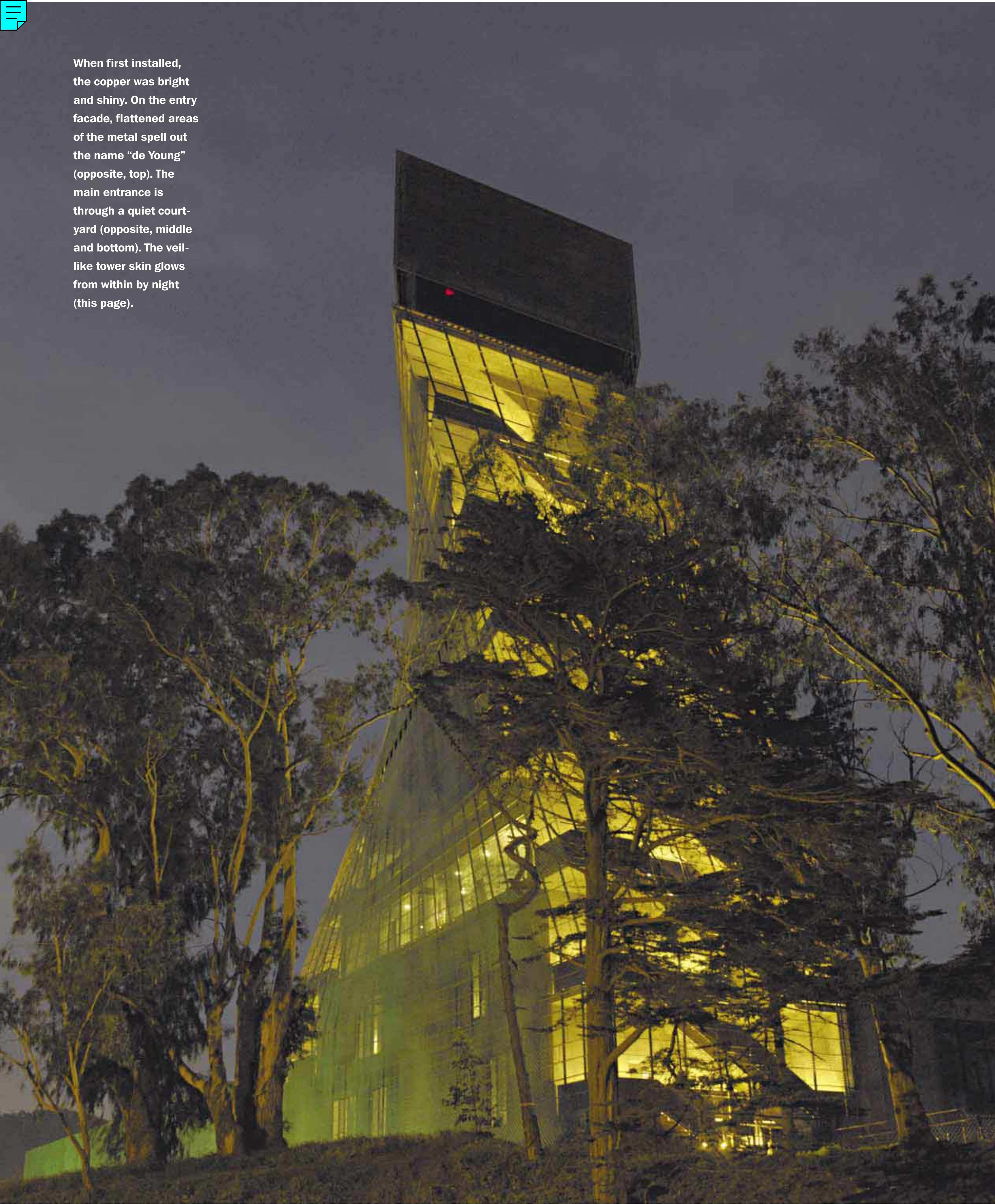
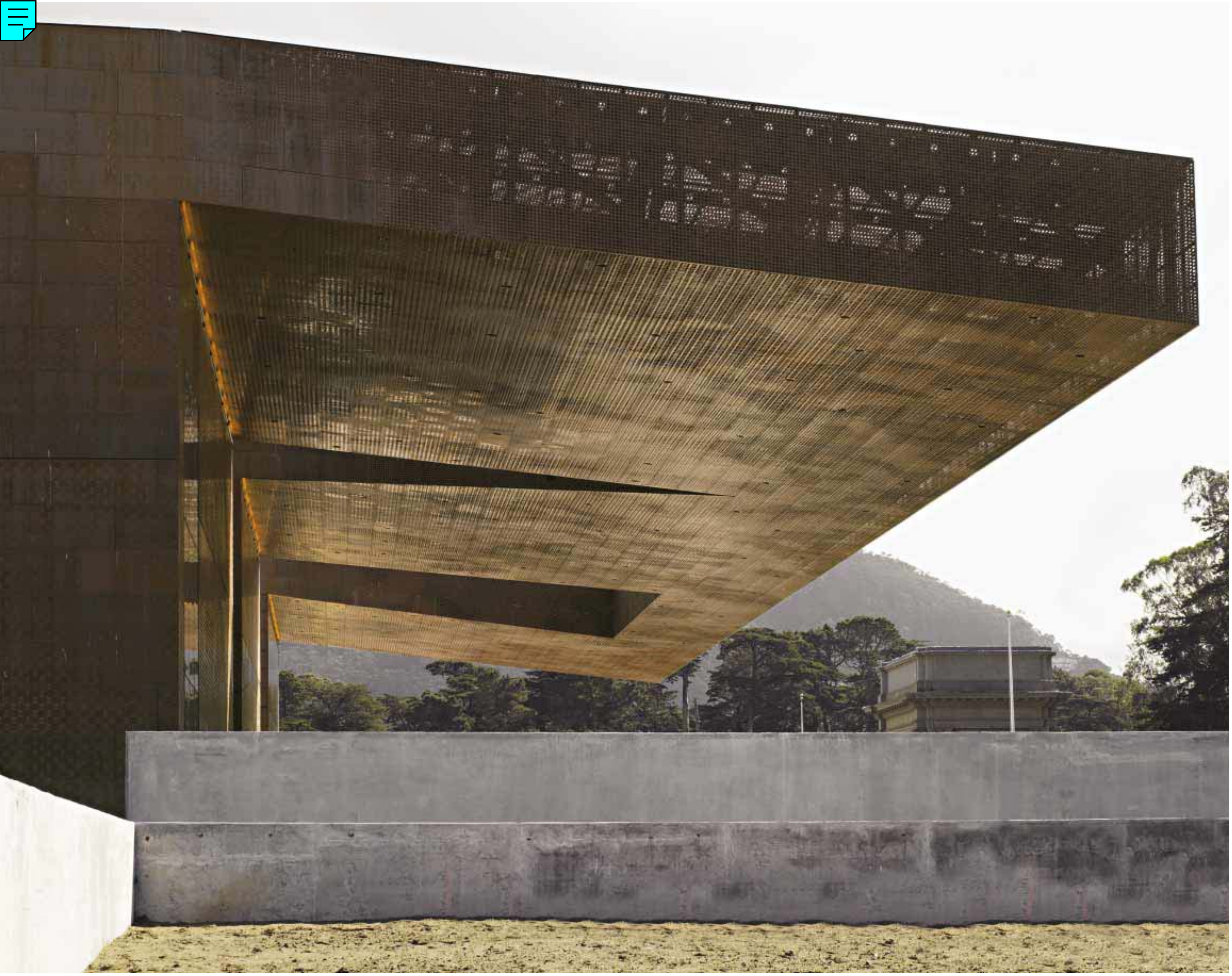
CONCOURSE LEVEL

1. *Main entry*
2. *Fern Court*
3. *Lobby*
4. *Tower lobby*
5. *20th Century art*
6. *Native American art*
7. *Membership center*
8. *Piazzoni murals*
9. *Café*
10. *Children's gallery*
11. *Office*
12. *Conference*
13. *Library*
14. *Eucalyptus Court*
15. *African art*
16. *Oceanic art*
17. *19th Century art*
19. *Textiles*
20. *Storage*
21. *Study center*
22. *Wilsey Court*

PHOTOGRAPHY: © FAMSF/MARK DARLEY (TOP AND OPPOSITE)

When first installed, the copper was bright and shiny. On the entry facade, flattened areas of the metal spell out the name “de Young” (opposite, top). The main entrance is through a quiet courtyard (opposite, middle and bottom). The veil-like tower skin glows from within by night (this page).





PHOTOGRAPHY: © FAMSF/MARK DARLEY (TOP); FAMSF (BOTTOM)

The museum's café/restaurant (opposite) spills out beneath a perforated-copper-wrapped canopy (above). This overhead form, an abstracted arbor 220 feet long with a 55-foot cantilever, gestures toward the de Young's adjacent sculpture garden.

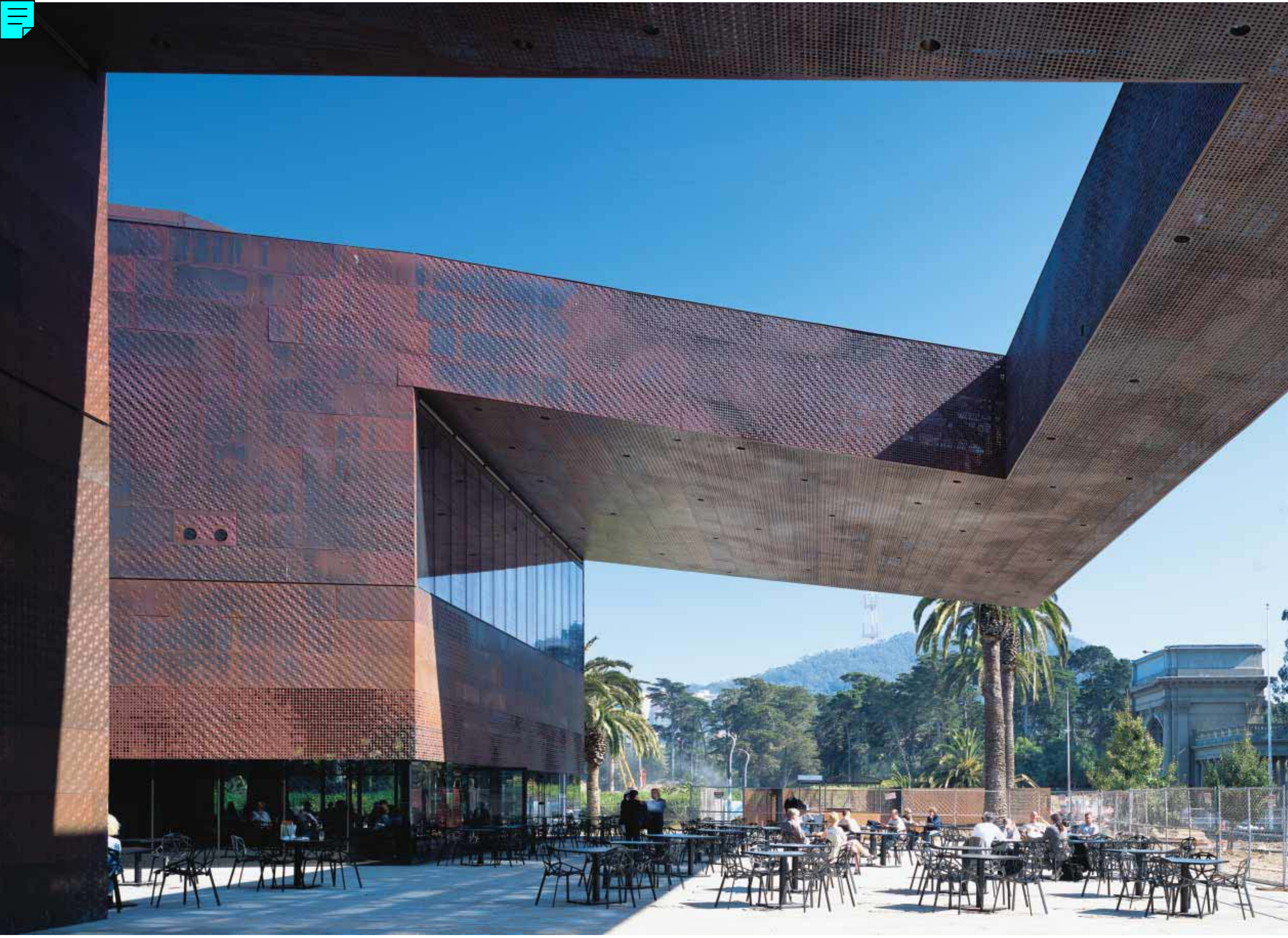
A key player: Diane B. Wilsey

When Dede Wilsey set out to raise nearly $200 million in private funds to rebuild the de Young, she refused to show her fellow donors any images. Her faith in the architects was great, she says, but she disliked the renderings. So the other donors simply had to trust her judgment, sight unseen. The approach worked, and Wilsey reports bringing in single-handedly $188 million (with the rest earned as interest). "As chair of the capital campaign for rebuilding," she recalls, "I was a committee of one—I like operating alone."

But before turning to private sources, the museum had twice, in 1996 and 1998, failed to pass a bond issue and obtain city funds for the project. Wilsey's decision to pursue only private financing, she says, "gave us the freedom to pick our architect—and be adventurous."

When it came to the search for an architect, the oft-told story has the museum's director, Harry S. Parker III, and Wilsey, in her signature slingback Chanels, scrambling around the train tracks in Basel, Switzerland, at night, looking for a signal building by Herzog & de Meuron. This unscheduled detour was Parker and Wilsey's firsthand introduction to the firm's work. The bejeweled campaign chair, a self-described conservative in her personal tastes, was soon convinced that these architects would suit the de Young—a conclusion later reached by the museum's selection committee.

Intimately involved in the architectural process, Wilsey reports running the "Manolo Blahnik or Chanel slingback test" on paving—demanding, and obtaining, certain changes in underfoot materials. The architects continue to speak of her glowingly. *S.A.*



Established masters of the visually ephemeral and dematerializing skin, Herzog & de Meuron pursued that experimentation here, particularly with the nine-story tower, housing the museum's educational functions and observation floor. By winding an open concrete exit stair (accessible for daily, nonemergency use) around the tower's exterior, the architects were able to veil the shaft in perforated copper. Nestled in a grove of mature eucalyptus trees, the metal edges appear to merge with surrounding branches.

The tower's twisting geometry further accentuates the effect. Rising from a rectangular footprint (aligned with a park roadway) to a nonorthogonal parallelogram (aligned with San Francisco's city grid), the sculptural form seems to transform itself as you walk around it, the shaft widening like a Mayan pyramid and then thinning out, almost vanishing.

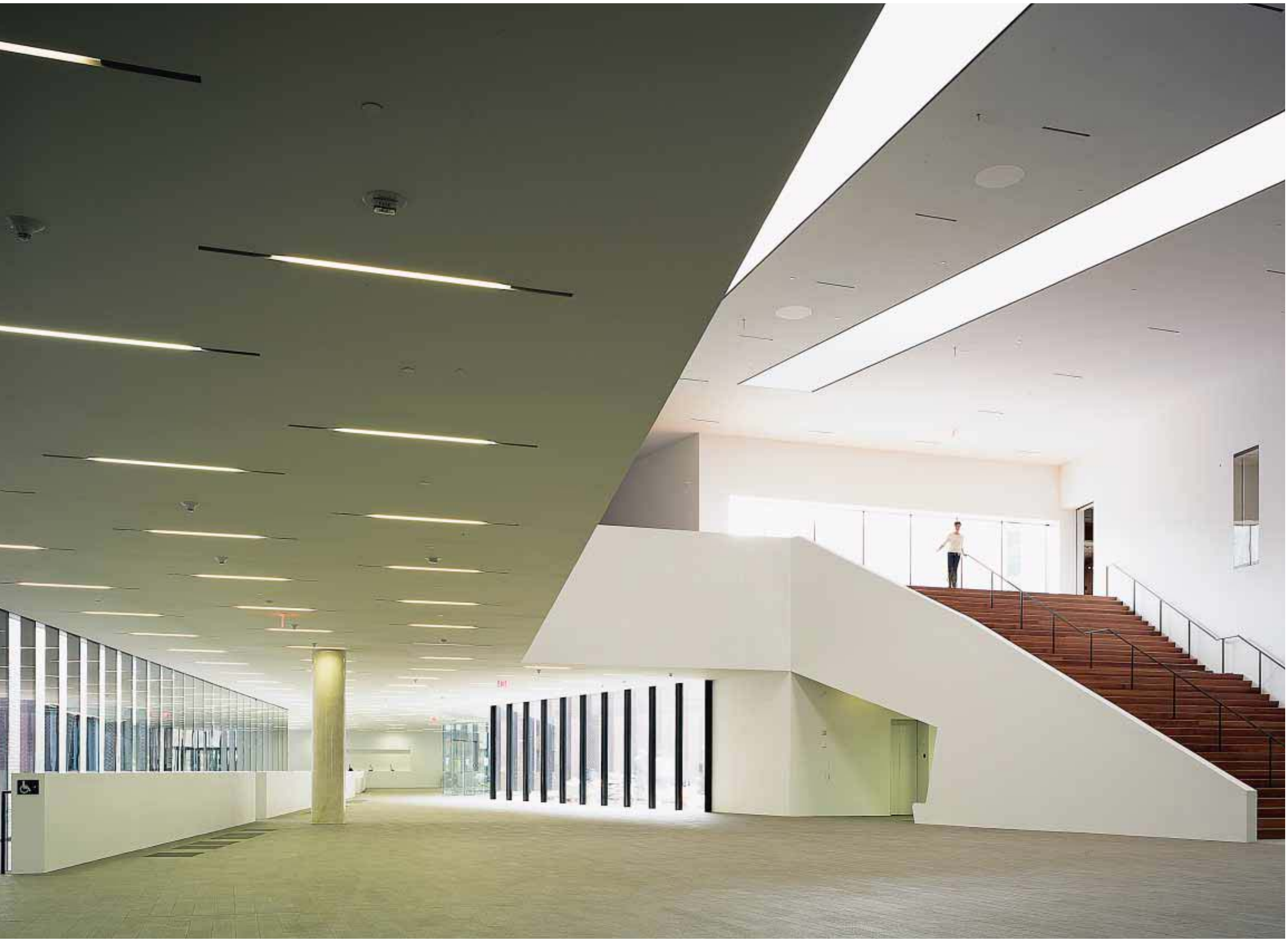
By including a tower in the scheme, Herzog & de Meuron judiciously—but without formal or stylistic literalism—refers back to the previous building. Other familiar elements, such as the courtyard entry, suggest that the new de Young is not really, after all, a stranger in this park.

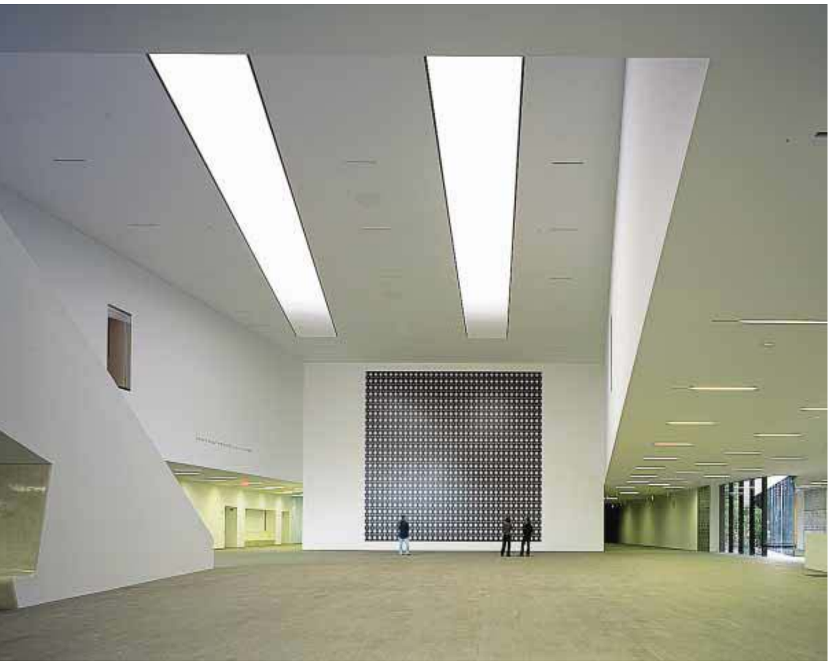
Treading (relatively) lightly on the site, the new footprint is 37-percent smaller than its predecessor's, but doubles the gallery space, bringing it to 84,000 square feet. Except at the tower, the 420-foot-long, low-slung structure rises only two stories, but extends below grade to gallery, auditorium, and museum-store space, with access to ample daylight and oblique views.

These days, the architectural catchphrases for buildings that convey openness tend to oscillate between "transparency" and "porosity," but the de Young has fully earned the designation of porous. Besides the porelike perforations in its lizard skin, the building draws in people in many ways. One of four concourse entrances, the main entry route, through the courtyard, sets up a human scale instead of a grandiose statement. Encouraging even the most casual visitor, the museum offers one third of its building free of charge: the lobby, children's gallery, café, museum store, tower observation deck, and display of the Piazzoni murals from the city's former main library.

The "porosity" lets nature penetrate deep into the building. In interstitial zones, where the three bands of gallery and circulation space diverge, the architects have created internal courts—patches of topography and landscape captured, or trapped, in uncovered, glass-walled enclosures—that evoke great terrariums or museum vitrines. Convincingly designed by landscape architect Walter Hood, the contours and rugged vegetation here (only accessible visually) recall the sand dunes on which the park rests.

Throughout the museum, you often find yourself looking into and through these reflective, glassy insertions. (Conceptually, the forms have an affinity with the inside/out ambiguities and mirroring potential of artist Dan Graham's work.) Emphatically nonhierarchical and nondictatorial, the de Young interior becomes dynamic right from the entry area—energizing



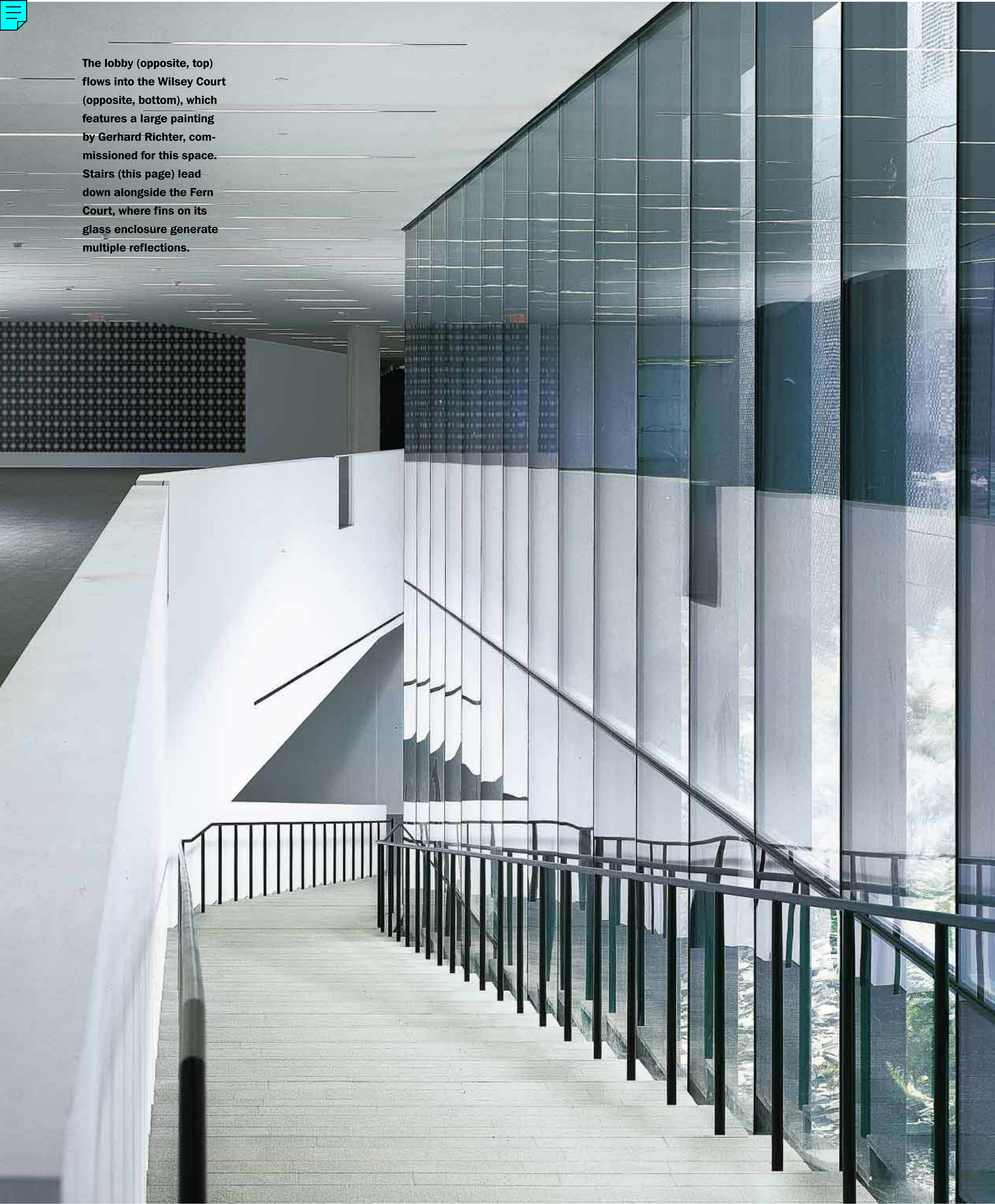


your journey through it—with compelling vanishing points, where the spatial bands converge. Dashes of fluorescent light stacattoing across the lobby ceiling heighten the sense of momentum. And the space really flows.

"There's a strong interplay," says Herzog, "between nature, actively involved and exposed; people looking at art, and at each other; and the artworks and artifacts themselves." Meanwhile, the galleries—with finishes, proportions, and lighting specific to each collection—remain calm, not distracting from the art. In the Oceanic exhibitions' eucalyptus-surfaced rooms, architecturally integral vitrines invite fully 3D views of masks and headdresses. For Contemporary art, white walls soar to 31.5 feet, with flush skylights that curators can dim or darken at the press of a button. While most museums shun windows in exhibition spaces, every de Young gallery connects visually with the outdoors, even if obliquely through a succession of galleries. Here, fritted, UV-protective glazing, skylight filters, brise-soleils of perforated copper, and the avoidance of direct rays counter sunlight's damaging effects. While the gallery windows relate to Golden Gate Park, the tower-top panoramas take in the urban fabric and landscape beyond. Geometrically, the tower's twist reconciles the orientations of park and city.

Back outdoors, the café spills out under a canopy or abstract arbor—220 feet long, with a 55-foot cantilever, all wrapped in perforated copper—gesturing toward a sculpture garden and grounds by Walter Hood.

The lobby (opposite, top) flows into the Wilsey Court (opposite, bottom), which features a large painting by Gerhard Richter, commissioned for this space. Stairs (this page) lead down alongside the Fern Court, where fins on its glass enclosure generate multiple reflections.



And though hidden, the structure's seismic features—the impetus for rebuilding—are significant. The horizontal building rests on base-isolated foundations with elastometric and slider bearings. A moat around the museum, buried beneath Styrofoam and landscaping, can accommodate lateral displacement in a quake. (The tower required more conventional concrete foundations with seismic allowances.) In tandem with base isolation, steel trusses and girders allow for the long clear spans, over 90 feet, that the previous building lacked. And construction finesse permitted the architects to treat the lower structure's vast $2 million copper roof as a "fifth facade." Visible from the tower, this roof is impeccably detailed, with vents, equipment, and other components concealed or streamlined, making the interior's multiband configuration as legible as rail tracks with switches.

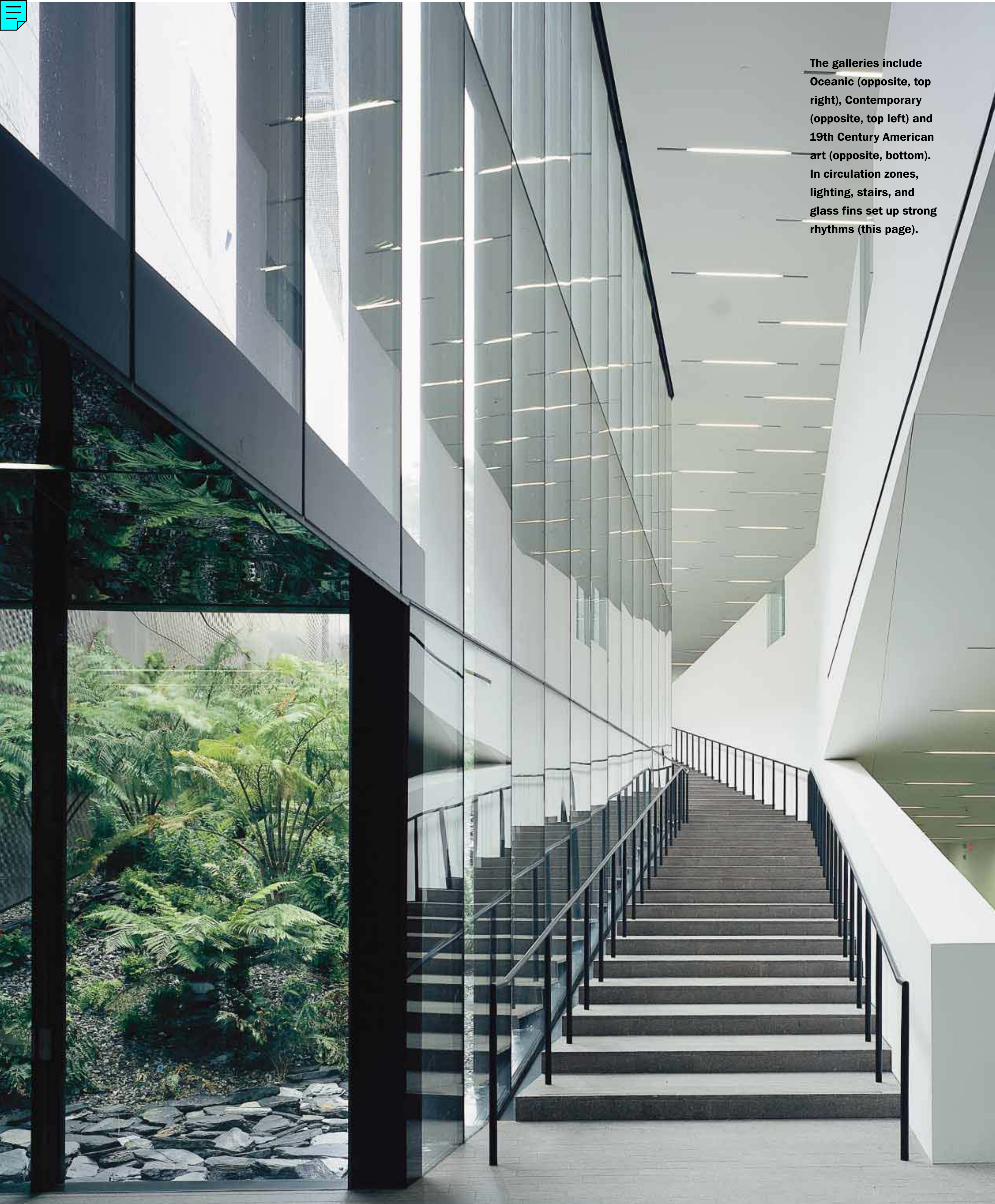
Almost precisely 16 years after the Loma Prieta quake, the project has emerged from its long struggles, with many aspects done right. Sure, some locals are still whining that the building resembles a fortress. True, the canopy can look overbearing in certain light—but wait just a few minutes, and it will turn into a delicate filigree again. And the perforated copper evoking dappled rays in the forest is far more convincing from outside than inside the building. (From the interior, the porous copper occasionally brings to mind perforated plastic construction wrap.) But quibbling aside, this remarkably sensual structure fits its setting and succeeds in so many ways. The twisting tower, once a focus of controversy, will likely become a landmark—one that blurs right into the San Francisco fog. ■

Sources

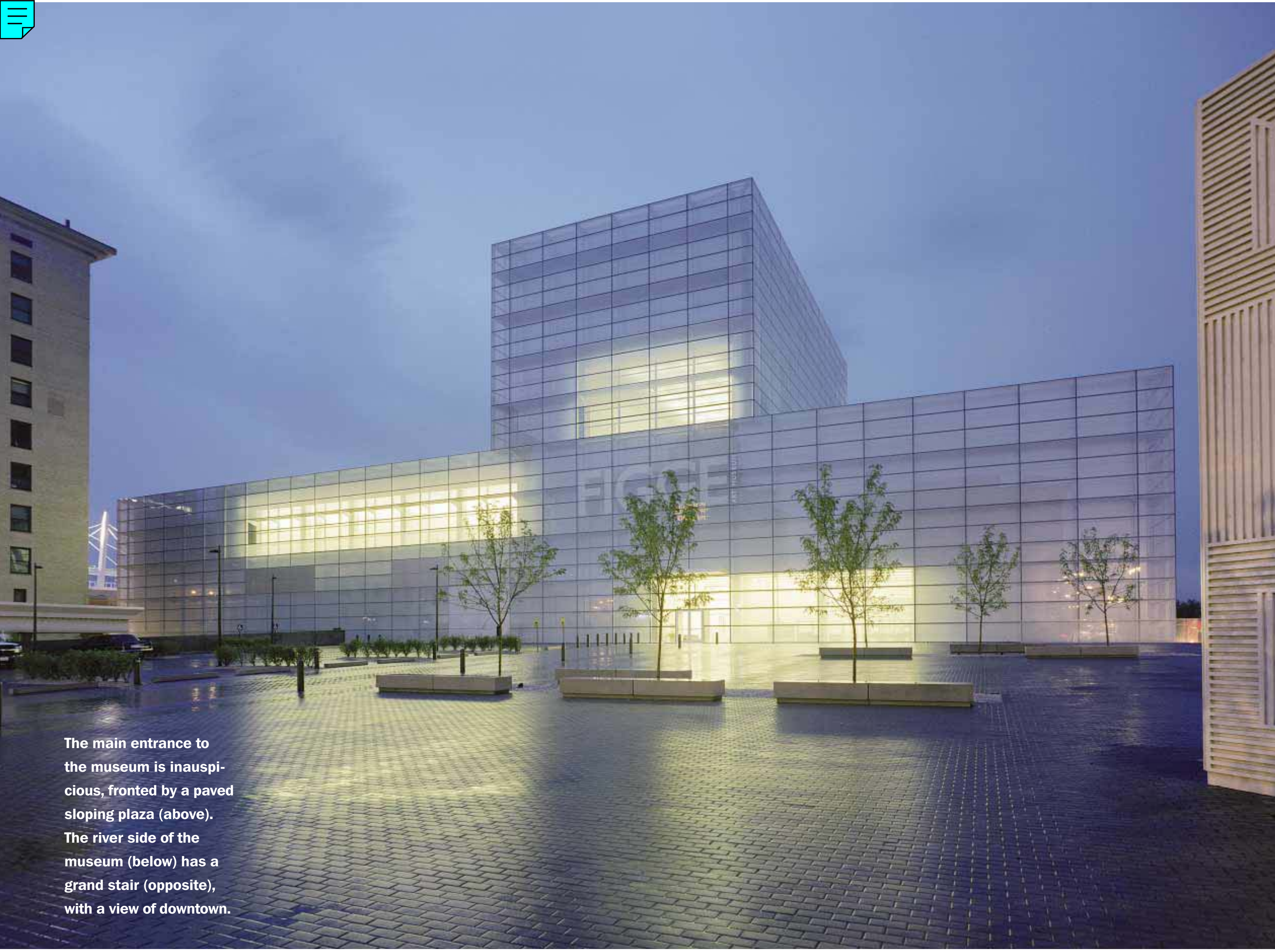
Copper panels and roof: *A. Zahner*
Lighting: *Lightolier; Dan O'Reilley*
Tiles: *Ann Sacks*

For more information on this project, go to Projects at **www.archrecord.com**.

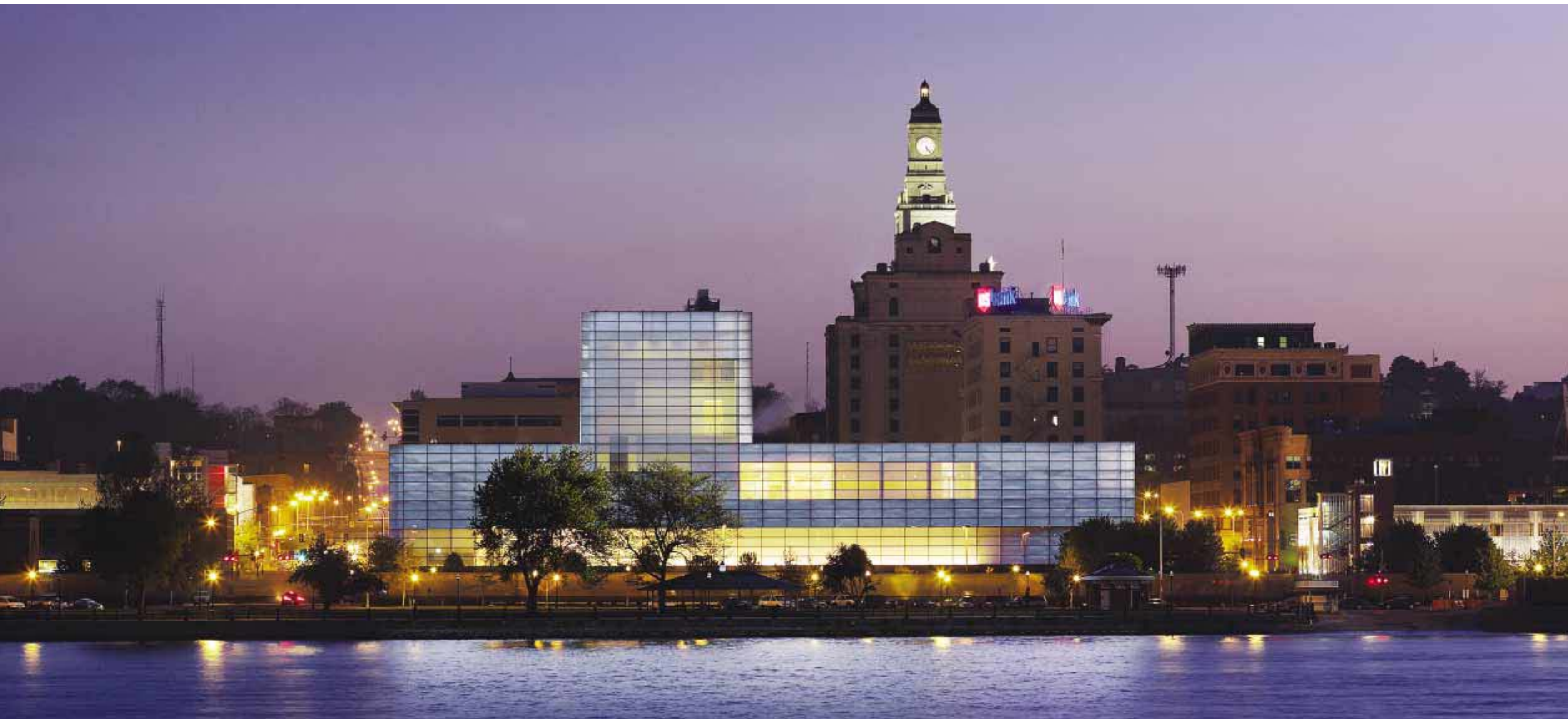
PHOTOGRAPHY: © CHRISTIAN RICHTERS (TOP LEFT)



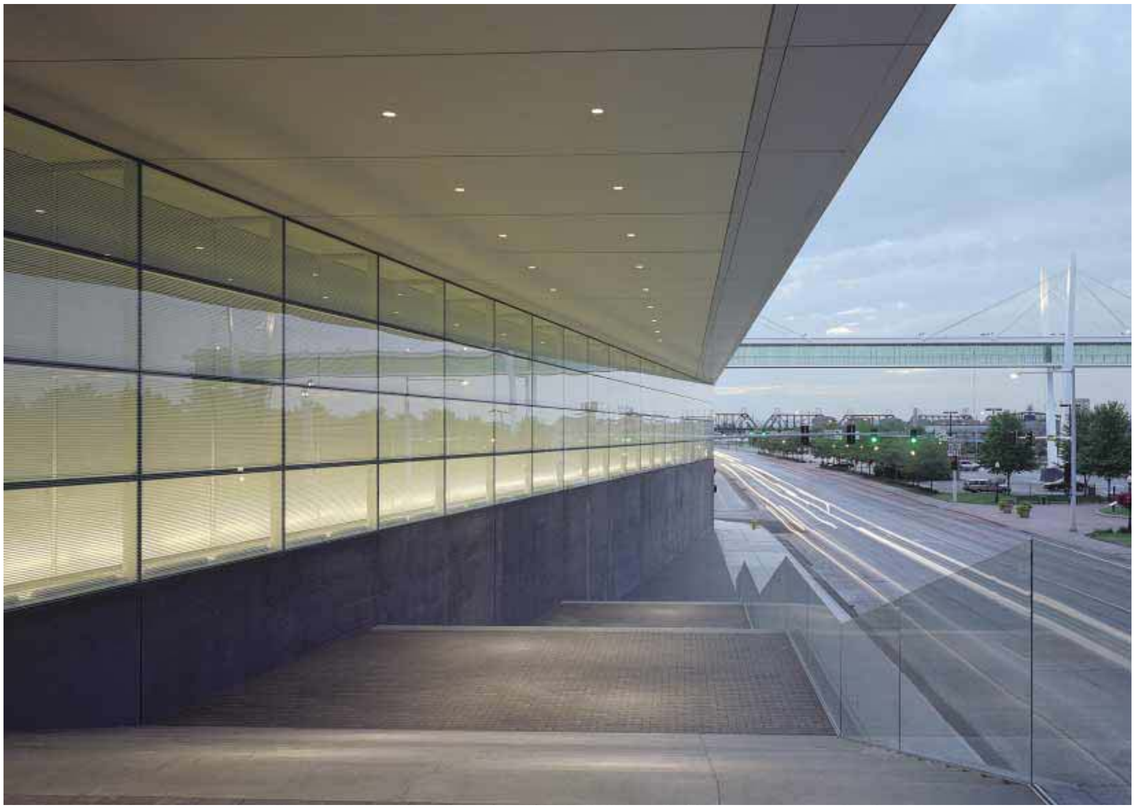
The galleries include Oceanic (opposite, top right), Contemporary (opposite, top left) and 19th Century American art (opposite, bottom). In circulation zones, lighting, stairs, and glass fins set up strong rhythms (this page).



The main entrance to the museum is inauspicious, fronted by a paved sloping plaza (above). The river side of the museum (below) has a grand stair (opposite), with a view of downtown.



David **Chipperfield's** luminous glass structure brings a clarity and rigor to the new **FIGGE ART MUSEUM** in Davenport, Iowa



PHOTOGRAPHY: © TIMOTHY HURSLEY (THIS PAGE AND OPPOSITE)

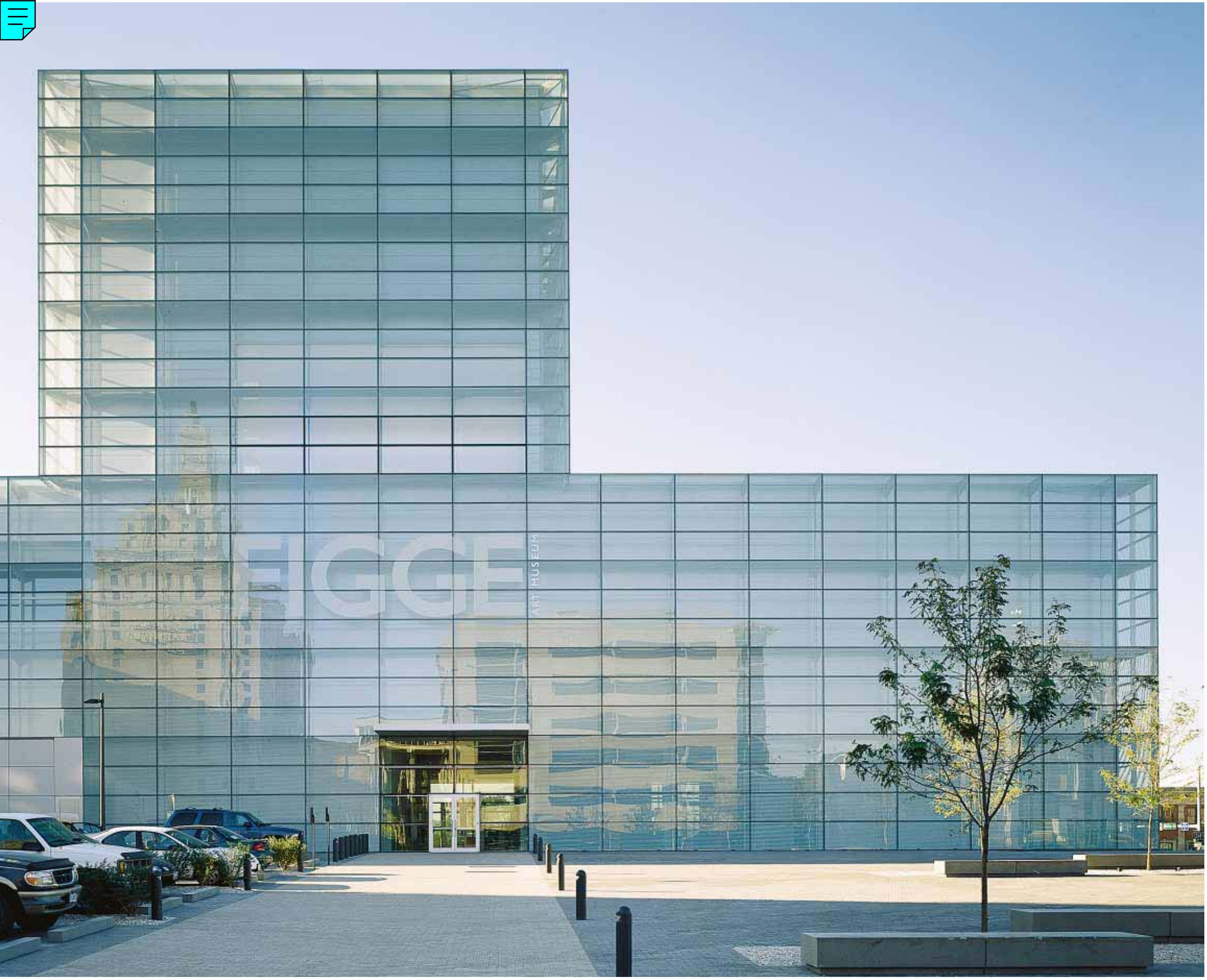
By Suzanne Stephens

The road to transforming the city-owned Davenport Museum of Art into the privately run Figge Art Museum was long and bumpy. But it resulted in a taut, gleaming glass, 100,000-square-foot structure rising serenely above the banks of the Mississippi in this small Iowa city west of Chicago. Although the museum leaders sought a structure that would be a magnet for downtown Davenport's revival, they weren't looking for an architectural extravaganza. As Thomas Figge, a prominent banker who engineered the contribution of $13 million from the V.O. Figge and Elizabeth Kahl Figge Charitable Foundation for the $46.9 million project, explains, the museum sought an architectural expression that would be "timeless and classic." The paradigm was nearby—Eero Saarinen's still-stunning Cor-Ten-steel Deere and Company Headquarters (1962) in Moline, Illinois.

Adding to the complexity of the task was the desire to attract the tourists and residents of the Quad City area (Davenport, Bettendorf, Iowa; plus Moline and Rock Island, Illinois) to a museum with a collection of American regional, Haitian, European, and Mexican colonial art that could not be called a compelling draw. So the museum expanded its program to offer special exhibition space (7,200 square feet on two floors), art studios, a 140-seat auditorium, and a shop and restaurant.

A design that was timeless, would attract droves of visitors, and spark up the downtown of a city of 100,000 sounds ambitious. On top of that loomed decisions about the site and how to pay for the whole thing. Founded in 1925, the Davenport Museum of Art had been most recently housed in a chunky, Brutalist concrete building removed from the downtown area. After some intense negotiating, Figge got 2.2 acres for the museum along the river, in an area where 19th-century Romanesque

Project: *Figge Art Museum, Davenport, Iowa*
Client: *Davenport Museum of Art*
Design architect: *David Chipperfield Architects—David Chipperfield, principal in charge; Franz Borho, project architect*
Architect of record: *Herbert Lewis Kruse Blunck Architecture, Des Moines; Cal Lewis, FAIA, Kirk Blunck, FAIA, principals in charge; Doug Frey, AIA, project manager*
Engineers: *Jane Wernick Associates, Charles A. Saul Engineering (structural); Arup (services)*
Consultants: *W.J. Higgins (curtain wall)*

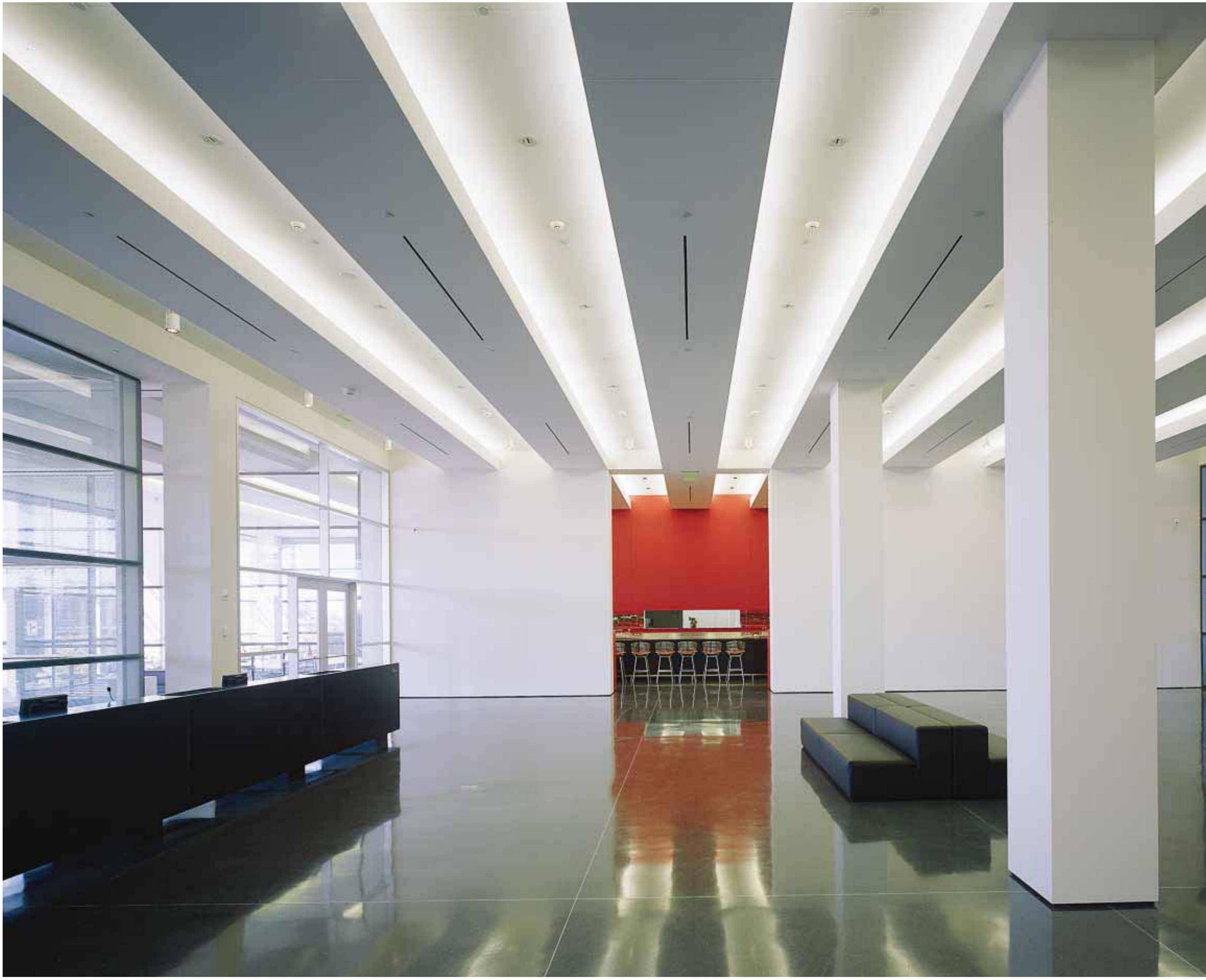


Two skins of fritted and clear glass (above) are separated by a 4-foot gap: a single exterior layer with open-joint panes, and an insulated, double-layered interior skin with butt joints. In some places, glass is mounted to perforated-steel panels concealing insulation and a weathertight membrane, backed by treated plywood and metal studs.

The patron speaks: Thomas Kahl Figge

The key player in getting the Figge Art Museum off the ground, Thomas Kahl Figge, explains that he was just carrying out his father's wish to revitalize downtown. His father, V.O. Figge, was a founder of the Davenport Bank and Trust, and after his death in 1995, his children set up the V.O. Figge and Elizabeth Kahl Figge Charitable Foundation. The $13 million that went to the Davenport Museum of Art was the largest donation the trust had given to a single institution.

It was natural that Thomas Figge, who had worked in the family banking business and was C.E.O. of the Ossian State Bank from 1993–98, should play a lead role in realizing the museum: He had served as president of the Davenport Museum of Art's board in the 1980s and is now an emeritus trustee of the Figge. (His four siblings are honorary museum trustees.) In the end, Figge says working with Chipperfield was a "delight." As for qualities that make a good patron (besides deep pockets), he cites "zeal and the willingness to see something through." In this case, a person with clout was also necessary in keeping the project moving, since the museum was between directors for much of the time. Unpaid volunteers, such as Figge and Diane Phinney, took up the slack, implementing, organizing, raising money. "Without Tom Figge we could not have gotten it going," Phinney says. Figge and numerous others say the same thing about her. *S.S.*



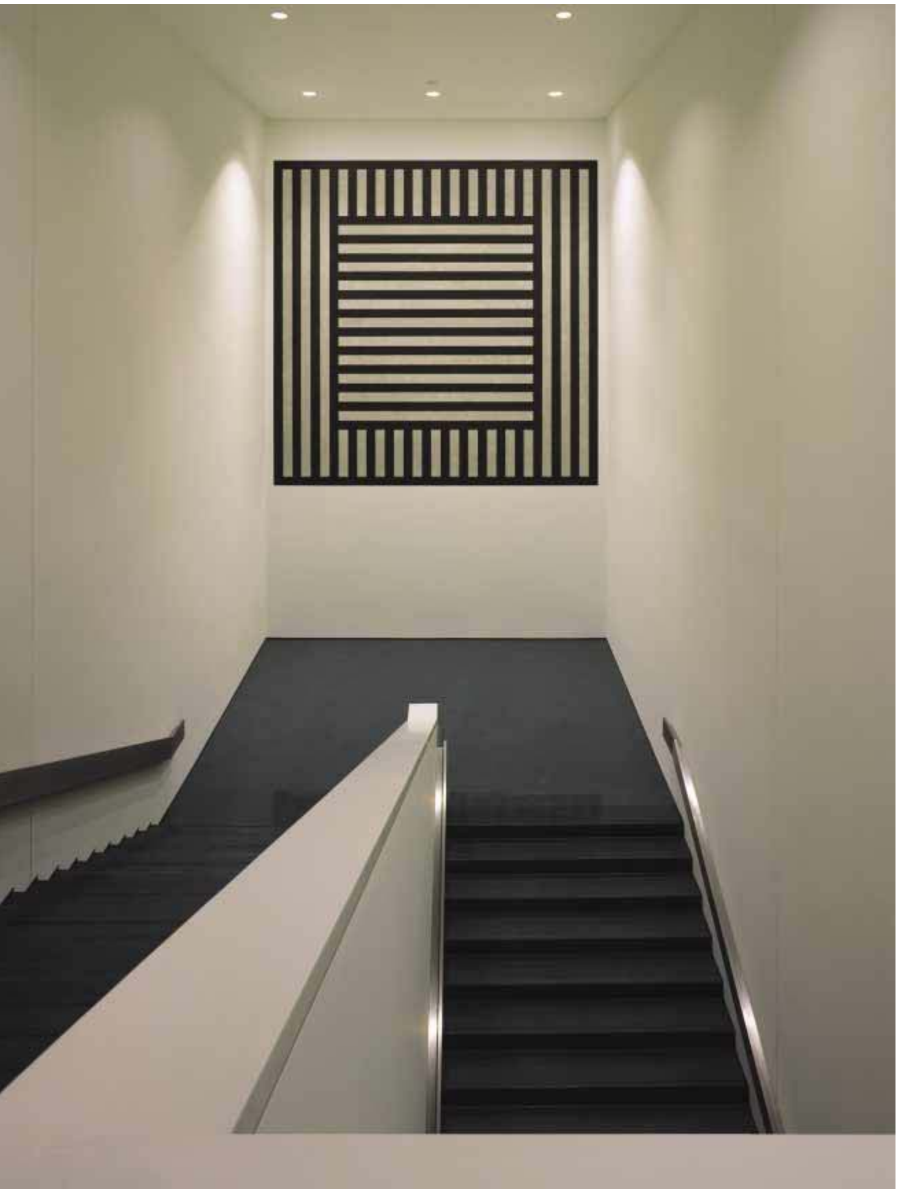
PHOTOGRAPHY: © CHRISTIAN RICHTERS (THIS PAGE AND OPPOSITE, TOP); DON RETHERFORD (OPPOSITE, BOTTOM)

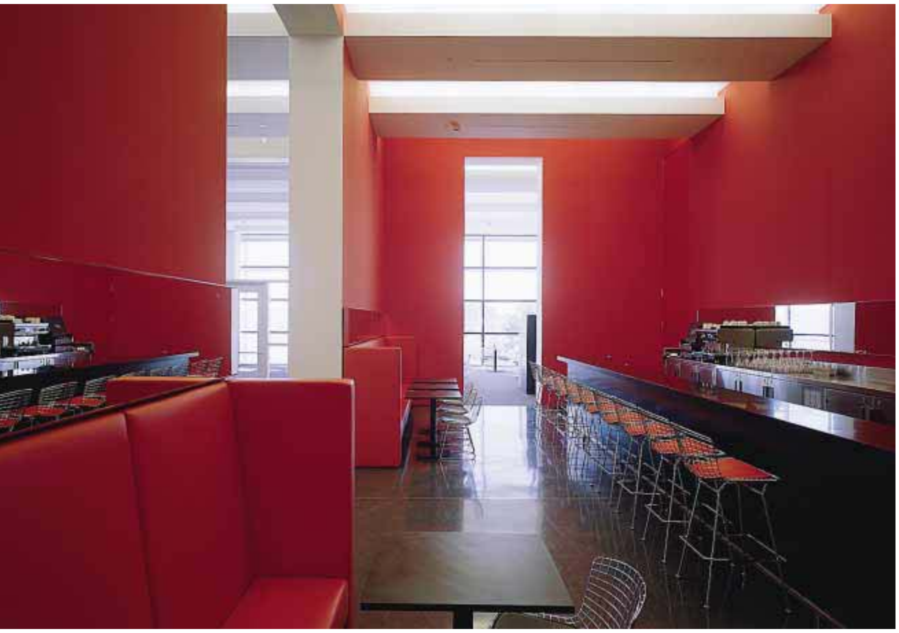
Revival and Italianate brick commercial buildings alternate with parking lots. To get more money (besides the Figge Foundation's contribution and those of other private donors), the museum went after $19.9 million in public financing from Vision Iowa, a state program for cultural and educational development, and from city funds available from River Renaissance, Davenport's initiative for jump-starting downtown projects.

Then came the search, which ended in the museum's architectural selection committee, chaired by Figge, deciding that David Chipperfield, a London-based architect, in association with Herbert Lewis Kruse Blunck Architecture of Des Moines, could best come up with the right scheme. Instrumental to the entire endeavor was another volunteer, Dianne Phinney, a former interior designer with Esherick, Holmsey, Dodge and Davis in San Francisco. Phinney organized the search and enlisted the advice of Bill Lacy, until recently the executive director of the Pritzker Architecture Prize. (The selection committee also included Martha Thorne, then an architecture curator at the Chicago Art Institute, who is now succeeding Lacy in the Pritzker role.) Of the 125 Requests for Qualifications sent, the committee received 54 official responses, and eventually narrowed the list to six firms: Richard Meier, Gwathmey Siegel, Rafael Viñoly, Heikkinen and Komonen, and Carlos Jimenez, plus Chipperfield. "Chipperfield's work jumped off the table in its minimalism and simplicity," says Phinney. A visit to Chipperfield's acclaimed River and Rowing Museum at Henley-on-Thames [RECORD, January 2000, page 116] sealed the group's decision.

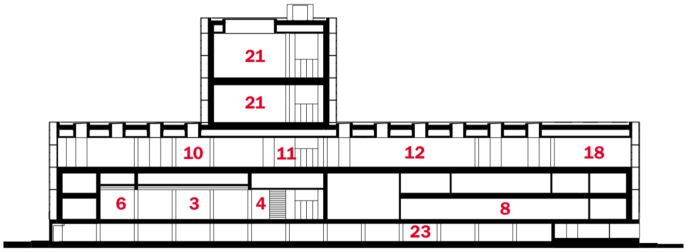
In coming to terms with this American project, Chipperfield shows his admiration for Saarinen's Deere building, but in an elegantly oblique way: Just as Saarinen's Cor-Ten-steel I-beam lattices create linear, structurally expressive brise-soleils over the heavily articulated steel-and-glass curtain walls, Chipperfield's double skin of fritted glass over a steel frame at the Figge shields the interior from the sun with a more abstracted and ethereal effect.

On the river side of the site, Chipperfield conceived of a monolithic horizontal elevation in the manner of expansive country houses along riverbanks in England and America: Though the actual entrance may be on the landward side, the facade facing the water is the more imposing one. In the museum's case, a grand stair along the south (river) elevation is carved into the massive cast-in-place concrete base containing a garage under the main lobby level. Right now, since the riverfront park is separated from the museum by a busy road, train tracks, a parking lot, and even a garish casino called Rhythm City, the stair entrance is largely a rhetorical gesture, as Chipperfield readily admits. Plans are afoot to move the parking and the





A charcoal terrazzo stair from the lobby is punctuated by Sol Lewitt's mural on the landing (left). Off the lobby, the bar leads to a restaurant with a river view (bottom).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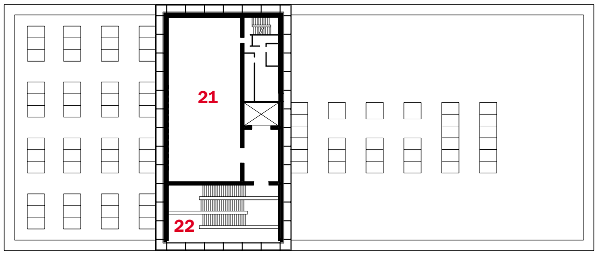
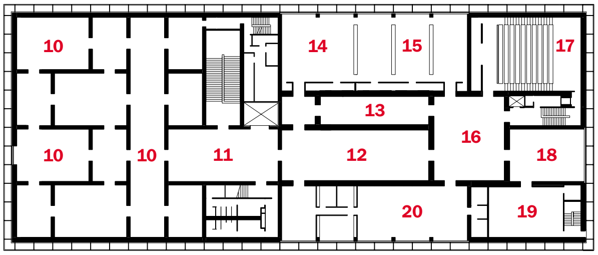
SECTION A-A



LEVEL THREE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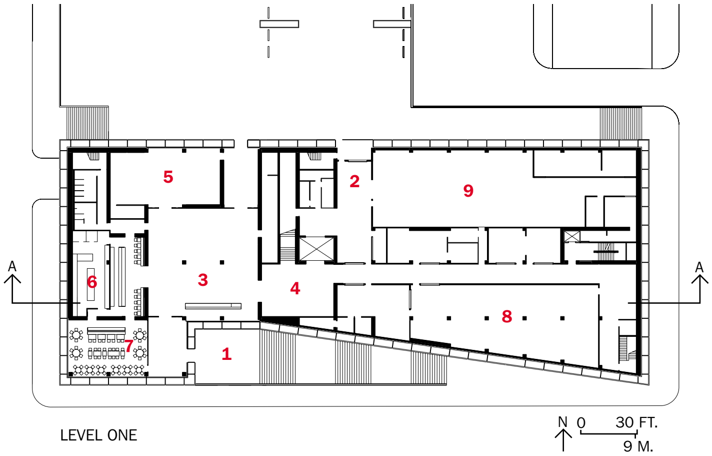
LEVEL TWO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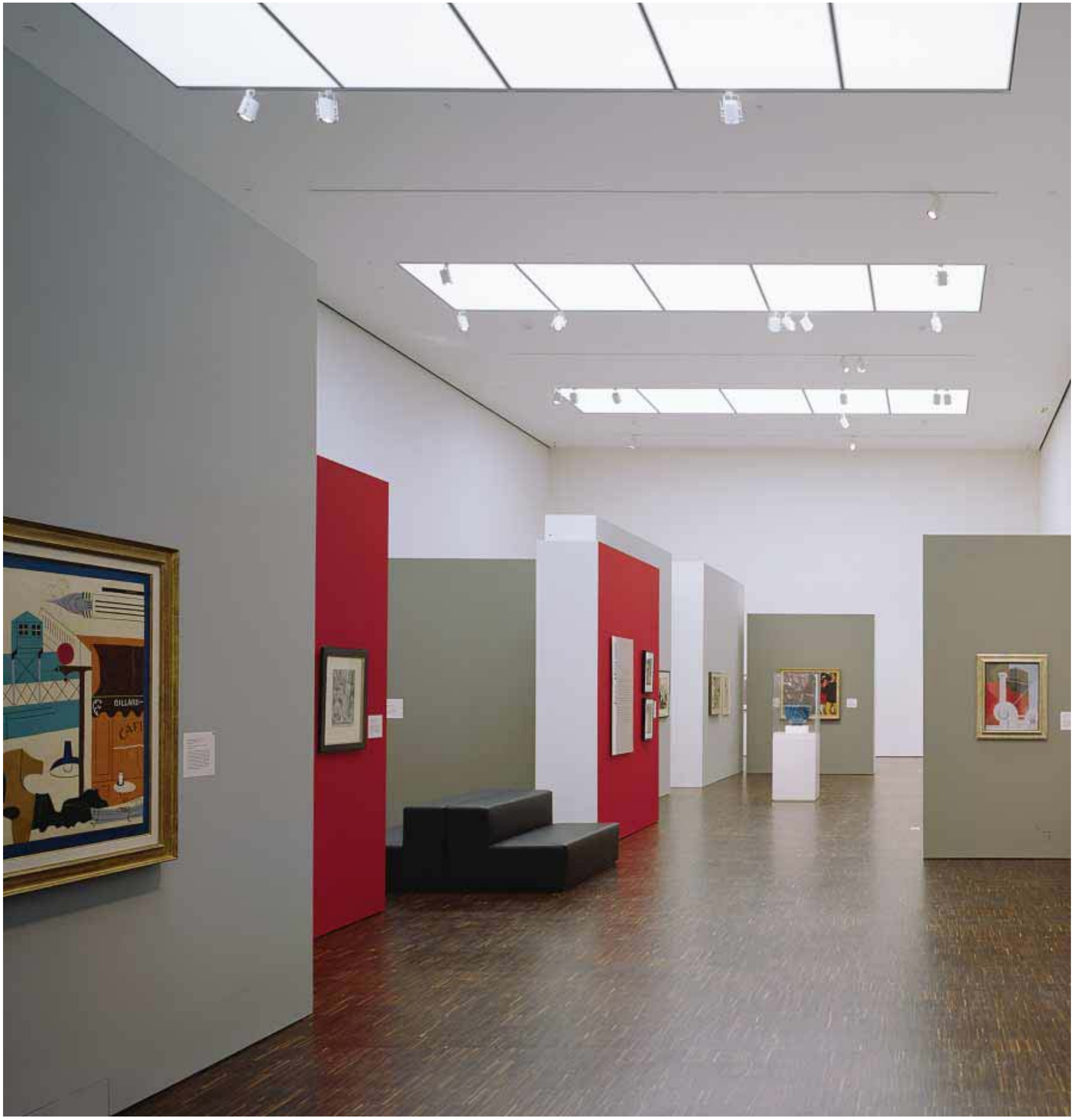
LEVEL ONE

1. *Riverside entrance*
2. *Plaza entrance*
3. *Lobby*
4. *Orientation gallery*
5. *Shop*
6. *Bar*
7. *Restaurant*
8. *Collection storage*
9. *Plant room*
10. *Permanent galleries*
11. *Hall/gallery*
12. *Print gallery*
13. *Activity center*
14. *Art studio (adult)*
15. *Art studio (youths)*
16. *Community gallery*
17. *Auditorium*
18. *Library*
19. *Library stacks*
20. *Administration*
21. *Special exhibition space*
22. *Garage*



To introduce the variable luminosity of daylight into the temporary exhibition galleries on the fourth floor (right) and the permanent galleries on the second floor, Arup's Andrew Sedgwick devised a system of layered toplighting: A clear, double-layered roof light containing operable louvers in its cavity is laid over a light box with two tones of fluorescent fixtures, sealed by a tensioned membrane of diffusing plastic for the laylight. The floor surface is smoked oak parquet.

PHOTOGRAPHY: © TIMOTHY HURSLEY (OPPOSITE, TOP); CHRISTIAN RICHTERS (THIS PAGE AND OPPOSITE, BOTTOM)

casino farther down the river. Until then, the actual entrance, on the landward side, faces a sloping plaza and parking lot.

Inside the museum, a grand switchback stair, with charcoal terrazzo treads and risers, seems to float out of incised reveals in the white walls as it leads to the permanent galleries and auditorium, art studios, and library on the second floor. From there, stairs abruptly shift to the river side of the building, where they lead up to a "wintergarden," a 60-foot-high narrow slot of space filled with light and, of course, view. The stairs continue to the loftlike galleries for special exhibitions on the third and fourth floors, which soar to 20-foot and 24-foot heights, respectively.

The white cube galleries—and actually most of the museum—nicely evoke the calm, pure spaces first seen in the U.S. with the 1939 Museum of Modern Art in New York City, designed by Philip Goodwin and Edward Durell Stone. More au courant here is the toplighting on the second- and fourth-floor galleries, where glass rooflights, louvers, and plastic laylights allow a mix of daylight with two tones of fluorescent illumination, supplemented by incandescent spots. When it works well, the galleries are bathed in a soft, even light. Unfortunately, the computer system operating the louvers was not functioning correctly in the first six weeks. The effect was not pretty, and light tones mixed. Reportedly this glitch is being corrected.

Getting rid of kinks takes time. Time will also tell how the Figge succeeds as a museum and as a magnet for the city. The museum's architecture, while imposing on the skyline—luminously so at night—belongs to the mute, cool school of Modernism of Yoshio Taniguchi, Kazuyo Sejima, or Renzo Piano. Fortunately, the craftsmanship, while not of the Euro/Japanese sort, holds up. The real difference lies in the Figge's less spectacular permanent collection, necessitating the museum to book outstanding traveling exhibitions. It has a good start with *The Great American Thing: Modern Art and National Identity, 1915–1935*, which remains on view until January 1. And fortunately, Chipperfield's clean, unfussy design endows the galleries with a flexibility and neutrality so desirable for such shows. ■

Sources

Glazing, insulated panels: *Old Castle Glass*

Skylight: *Unicel Architectural Corp.*

Metal-and-glass curtain wall: *Architectural Wall Systems*

Wood flooring: *Bembé Parkett*

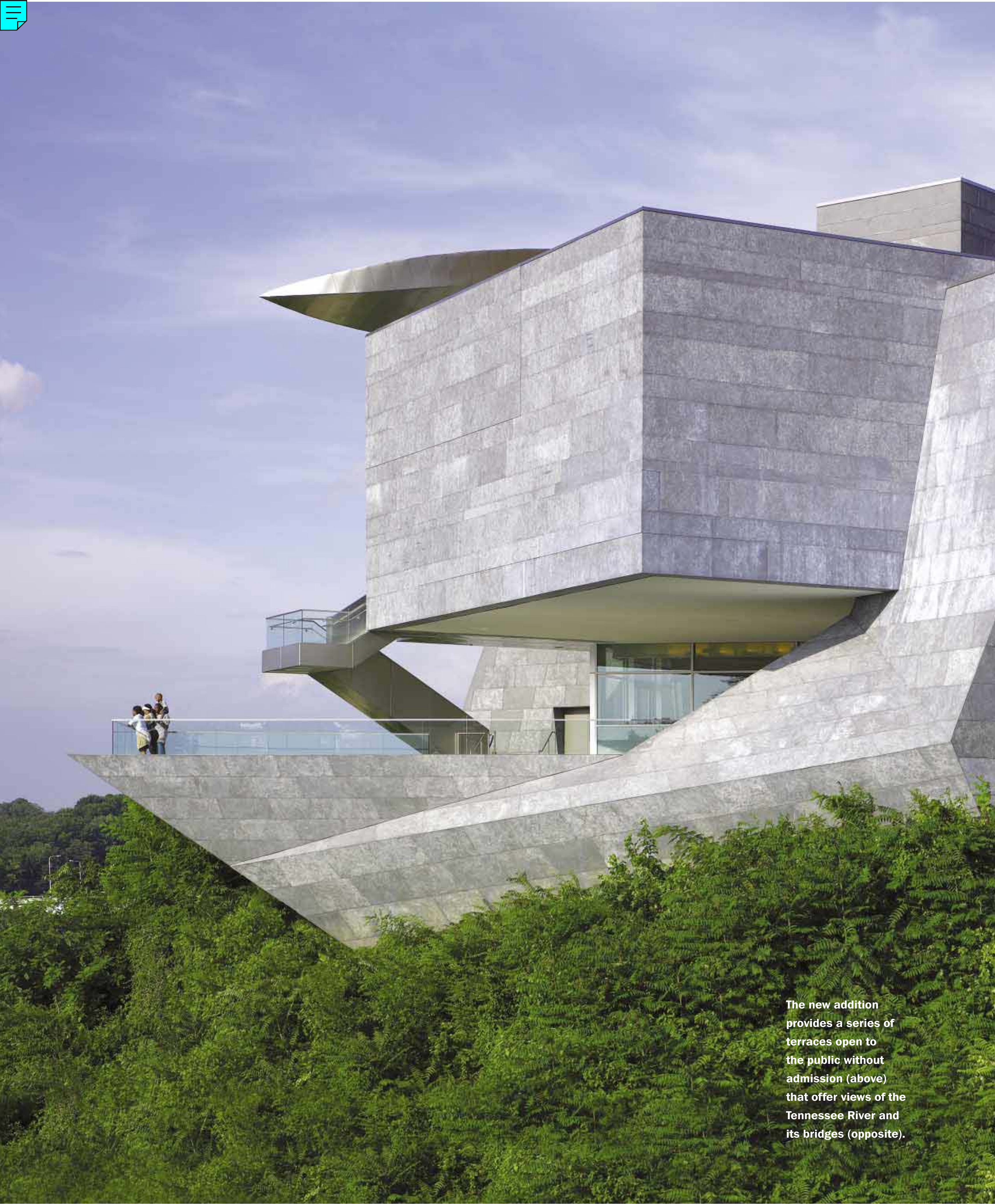
Office furniture: *Knoll*

Fixed seating: *Poltrona Frau*

Downlighting and task lighting: *Erco*

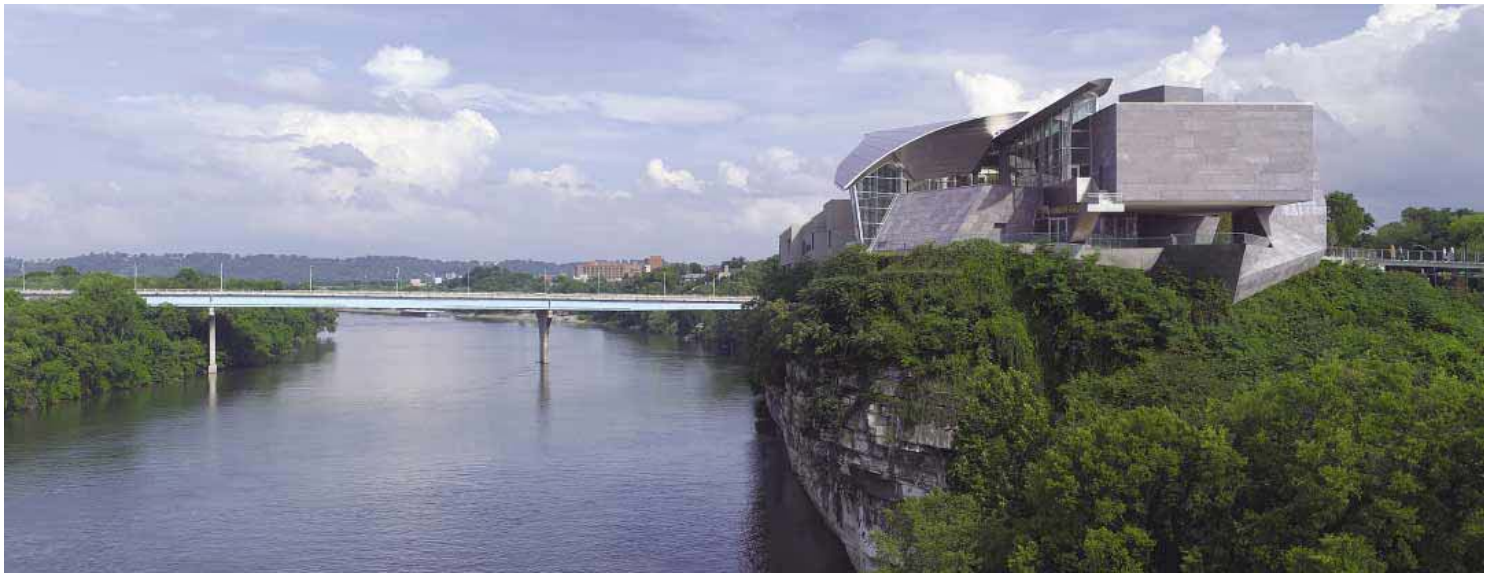
Lighting controls: *Lutron*

For more information on this project, go to Projects at **www.archrecord.com**.



The new addition provides a series of terraces open to the public without admission (above) that offer views of the Tennessee River and its bridges (opposite).

Randall **Stout's** muscular addition to the **HUNTER MUSEUM** in Chattanooga transforms a staid institution and gives it a new public profile



PHOTOGRAPHY: © TIM GRIFFITH, EXCEPT AS NOTED

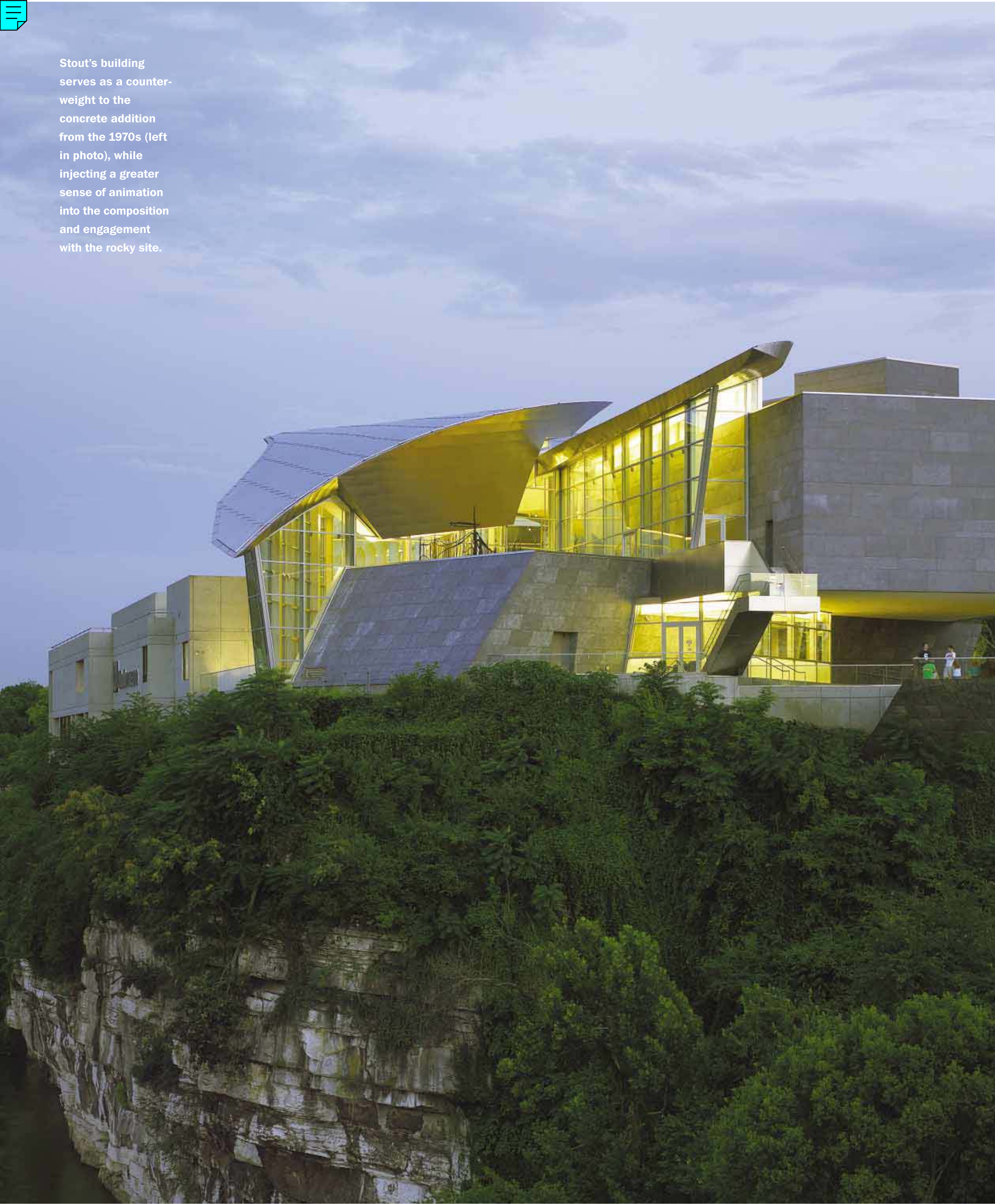
By Clifford A. Pearson

After nearly 50 years of splendid isolation on the bluffs overlooking the Tennessee River, the Hunter Museum decided to reach out to the city beyond its gates. So in 2002, it announced a major expansion that would not only provide 30,000 extra square feet for galleries and special functions, but connect the venerable institution to Chattanooga's redeveloped waterfront and its resurgent downtown. "We wanted to take the Hunter off the hill," states Rob Kret, the museum's director since 2000. In April 2005, a bigger, splashier, and more accessible Hunter, designed by Los Angeles–based Randall Stout, FAIA, opened its doors—literally and figuratively—to a public that included many people who never felt welcomed before.

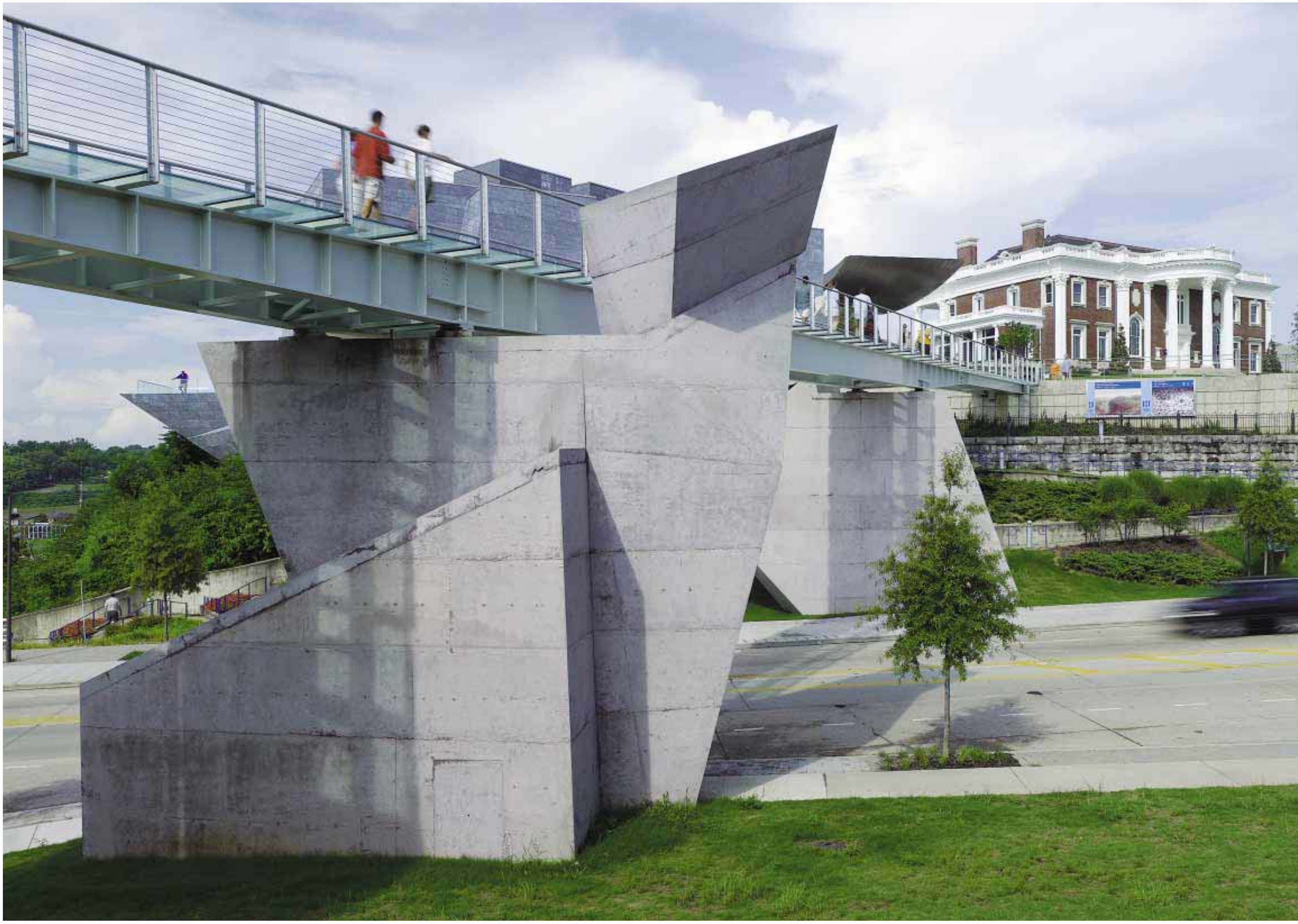
Housed in a 1905 neo-Georgian mansion, the Hunter had long projected an aristocratic air that charmed some visitors but kept others away. Changing attitudes on the museum's board of directors and a mayor of Chattanooga intent on transforming the city's riverfront pushed the institution in a new direction, starting in 2001. At that time, Mayor Bob Corker began a coordinated campaign to raise funds for an expansion of the Tennessee Aquarium (to be designed by Cambridge Seven Architects), a new children's museum (by Lee Skolnick), a series of new parks (by George Hargreaves), and the Hunter addition—all on or near the waterfront.

Making the Hunter a key element in this larger urban plan helped determine critical issues throughout the design and construction process—starting with finding the right location for the addition. In the 1970s, the museum had built a Brutalist concrete wing to the east of the mansion and moved its main entrance there. So some people figured the museum would continue expanding in that direction. But Stout proposed adding the new structure to the west, shifting the museum's focus toward downtown and creating an ensemble of buildings with the mansion at its center. Like a chess player's first move, the siting of the new 20,000-square-foot building helped shape a long series of decisions affecting everything from the layout of galleries in the existing museum to the location of the loading dock and art storage. While the glittering new building now captures most people's attention, Stout's scope of work included totally rethinking display and circulation spaces throughout the museum, restoring the historic mansion, inserting 8,000 square feet of new administrative and support spaces underneath the 1970s addition, creating a new sculpture garden in front of the museum, and designing a pedestrian bridge to connect the museum to the rest of downtown Chattanooga.

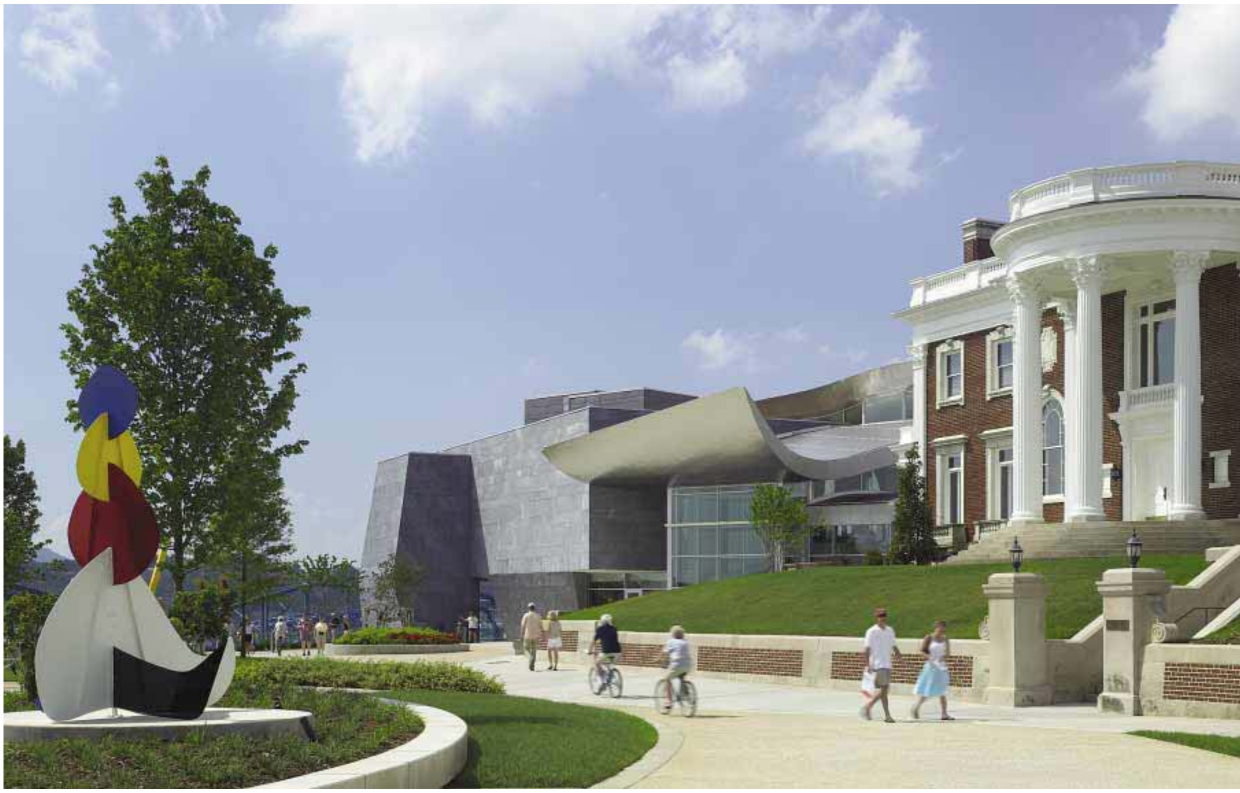
Project: *Hunter Museum of Art, Chattanooga, Tennessee*
Architect: *Randall Stout Architects—Randall Stout, FAIA, principal in charge; Sandra Hutchings, project designer; John Murphey, AIA, Rashmi Vasavada, AIA, project architects; Hailun Chang, job captain; Cynthia Bush, Jerry Chao, Eric Cheong, Ian Collins, Amy Drezner, Robert Ley, Jason Marshall, project team*
Associate architect: *Derthick, Henley & Wilkerson Architects*
Collaborating architect: *Hefferlin + Kronenberg Architects*
Engineers: *John A. Martin + Associates (structural); March Adams Associates (mechanical, electrical, civil)*
Consultants: *Ross/Fowler (landscape); Fisher Marantz Stone (lighting)*
Construction manager/general contractor: *EMJ*



Stout's building serves as a counterweight to the concrete addition from the 1970s (left in photo), while injecting a greater sense of animation into the composition and engagement with the rocky site.



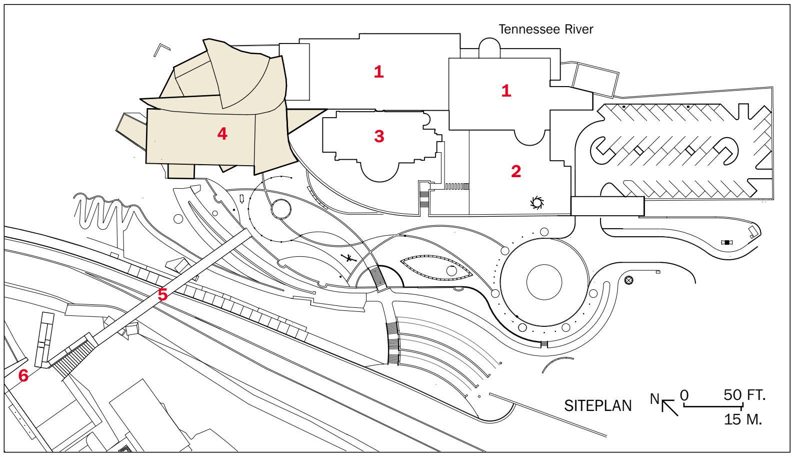
A new pedestrian bridge (above), designed by Stout, connects the museum to the aquarium and downtown. A sculpture garden leads visitors past the 1905 mansion and to the new museum entrance under the curving metal canopy (right).



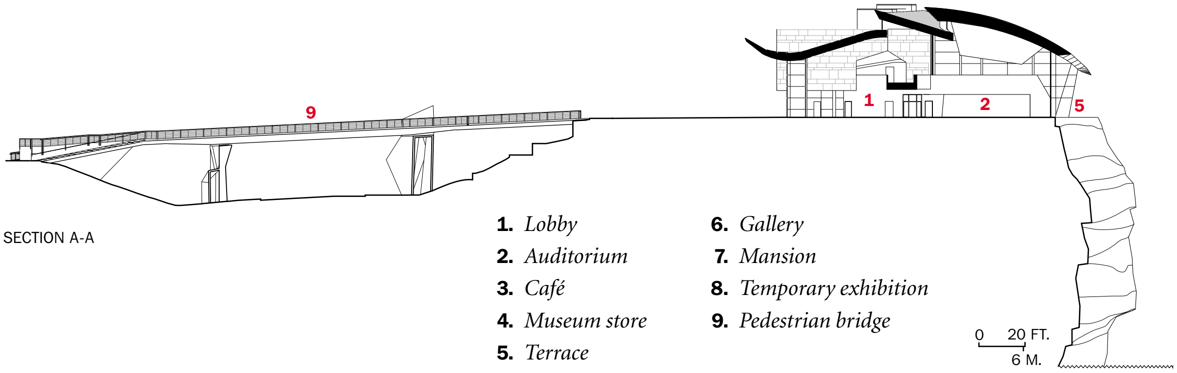
Making it happen: Ruth Holmberg

Kick-starting the $22 million expansion and renovation of the Hunter Museum was the work of an unusual collaboration between the public and private sectors in Chattanooga. Instead of raising funds on its own, as it had done in the past, the museum teamed up with the Tennessee Aquarium, the Creative Discovery Museum, and the city itself to participate in a $120 million campaign that included $56 million from visitor taxes, $13 million from land sales and state and federal sources, and $51 million from private giving.

The city's mayor, Bob Corker, the Hunter's board chairman, L.H. "Hacker" Caldwell, and the museum's director, Rob Kret, played important roles in making the project happen, but all point to Ruth Holmberg (left)—a board member, philanthropist, and former publisher of the *Chattanooga Times*—as perhaps the most critical element in the successful effort. Not only did she and her now-deceased husband, William, give the most generous private donation, but she offered expert advice at key moments during the project's development. From the beginning, she pushed the Hunter to expand its presence in the community. "The museum hadn't been a very welcoming place to some people, so the question was: How do we get people to come here when a lot of them don't even know we're here?" she recalls. Kret credits her with advocating the need for strong architecture to reshape the museum's identity, and she was an early supporter of Stout's design. When some board members expressed concern about placing the new entrance 300 feet away from the parking lot, Holmberg, who is in her 80s, said a walk is good for everyone. End of argument. *C.A.P.*

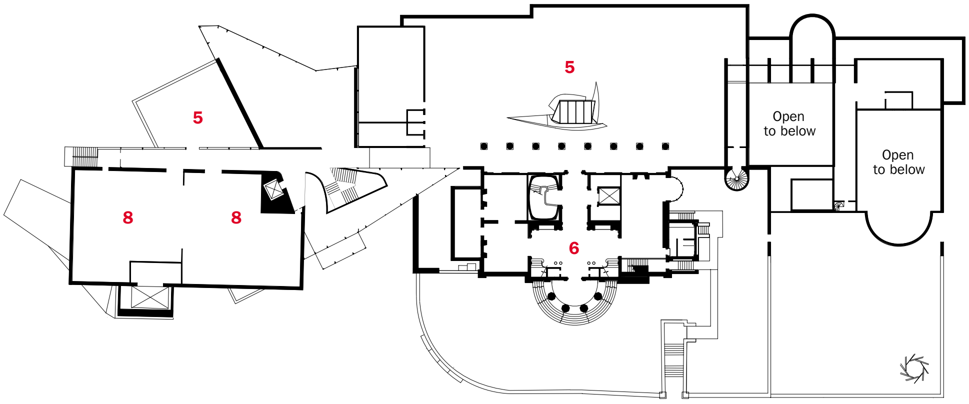


1. *1970s building*
2. *East addition (2005)*
3. *Mansion*
4. *West addition (2005)*
5. *Pedestrian bridge*
6. *Walnut Street Bridge*

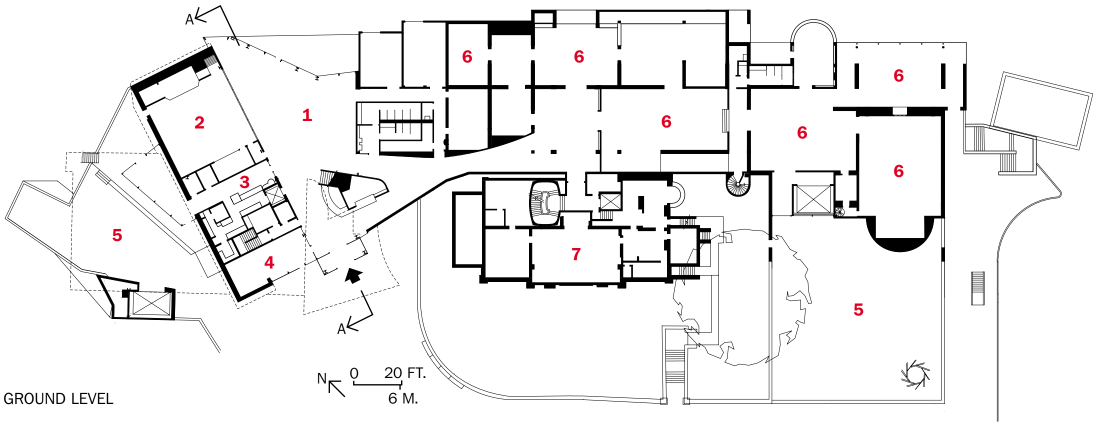


SECTION A-A

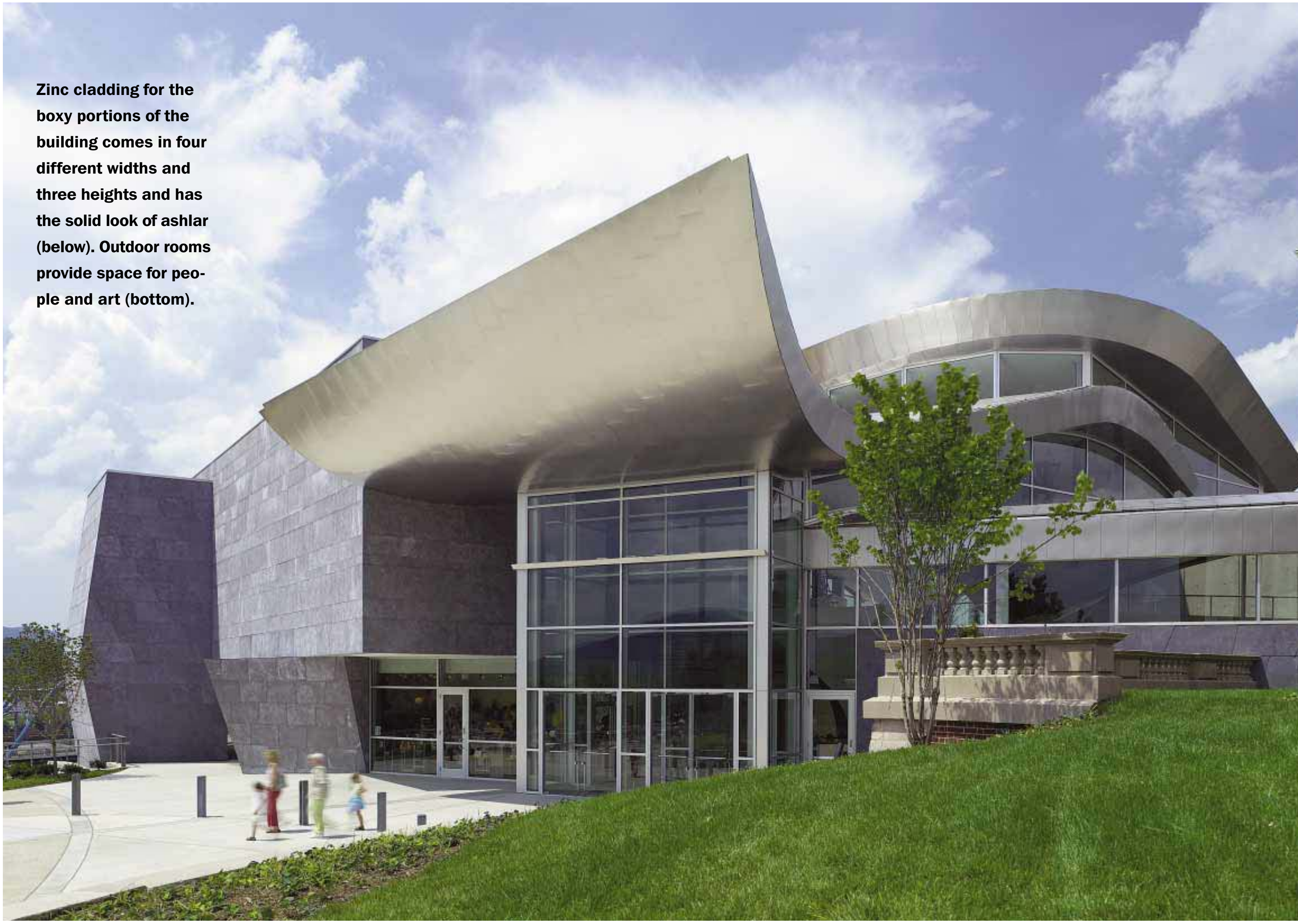
1. *Lobby*
2. *Auditorium*
3. *Café*
4. *Museum store*
5. *Terrace*
6. *Gallery*
7. *Mansion*
8. *Temporary exhibition*
9. *Pedestrian bridge*



UPPER LEVEL



GROUND LEVEL

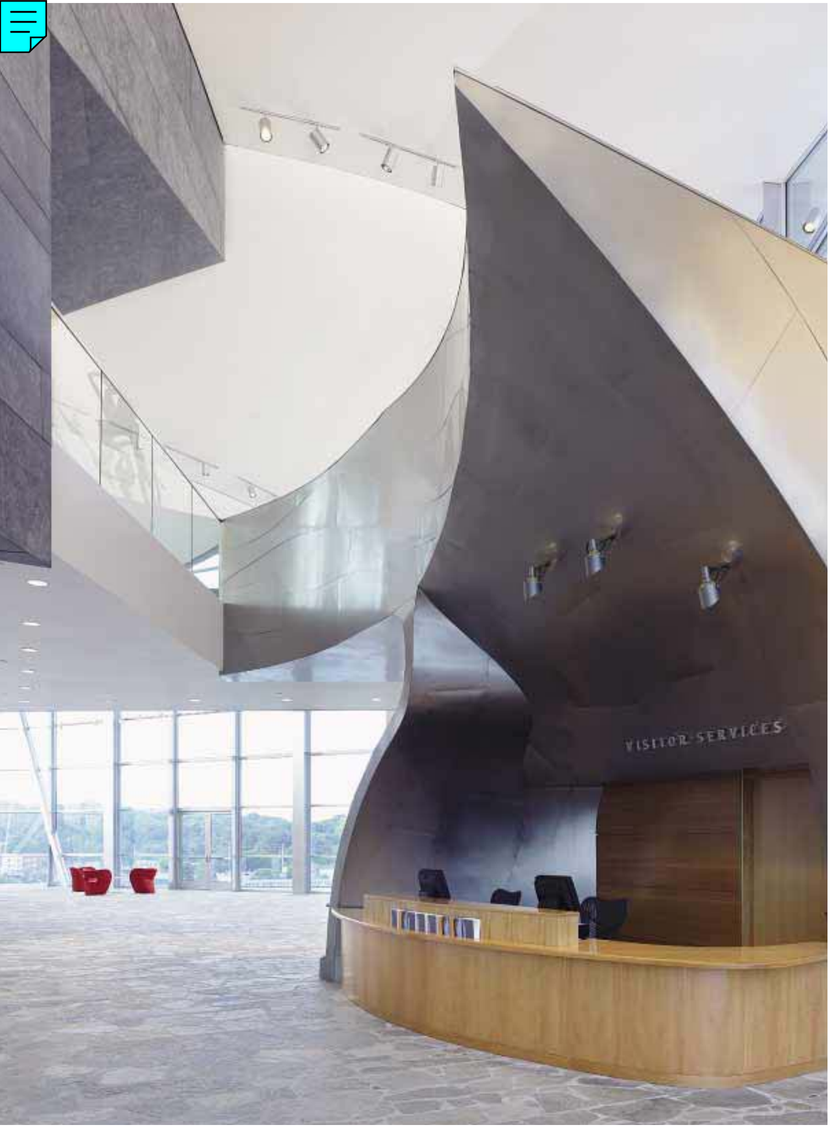


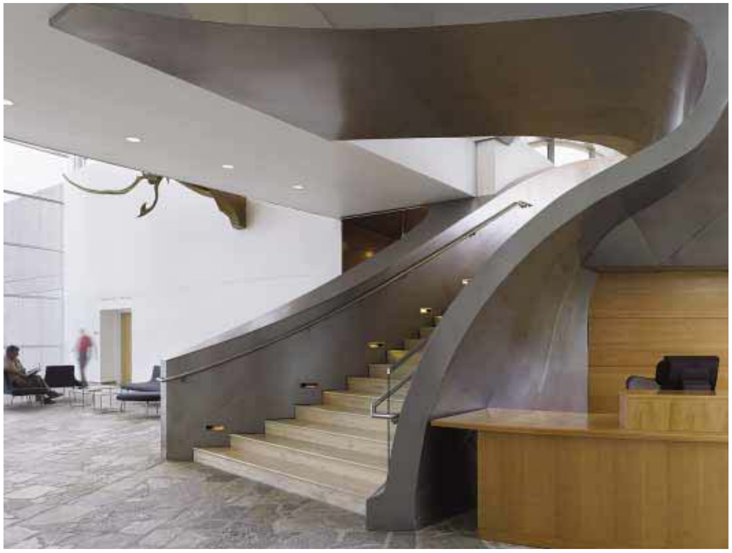
Zinc cladding for the boxy portions of the building comes in four different widths and three heights and has the solid look of ashlar (below). Outdoor rooms provide space for people and art (bottom).

At first glance, the kinetic angles and curves of Stout's addition seem to jar with the staid columns and bricks of the mansion and the plodding concrete lines of the '70s building. But given such disparate pieces of architecture to work with, Stout had no way of making a seamless composition. So he balanced his addition on the other side of the mansion from his '70s precursor and gave it its own formal and material expression. Structurally, too, the new building—steel-framed and wrapped with metal panels and glass—is independent of the two earlier buildings (both masonry structures, one brick and the other concrete).

Instead of taking cues from the mansion, Stout looked to the rugged site for inspiration. Raised in Knoxville, Tennessee, he remembers seeing the dramatic rock formations of Rock City, Ruby Falls, and Umbrella Rock in the Chattanooga area as a child. "I kept going back to the idea of rock and river," he explains. So he designed his building with jagged lines and blocky forms that seem to grow from the limestone bluff to which it clings. Although he clad the building in zinc panels, not stone, the material has been oxidized to give it a rich, almost geological patina. "I wanted it to look even older than the bluffs," says the architect. "The material needed to have an integrity to relate to the rock formations."

According to native Americans who lived in this area, the top of the bluff where the new addition sits was a sacred space guarded by a hawk. "I kept the hawk in mind," Stout says, when he designed the wing-like roof over the 45-foot-high lobby. The resolution of the curving roof and swooping entry canopy with the angular, faceted forms of the rest of the building may be the design's weakest link. But the building does so





many other things right. The best aspect of Stout's design is the way it engages the site, pulling visitors around and, in one place west of the entry, under its muscular forms so they can relax on a series of terraces offering spectacular views of the river below and the historic Walnut Street Bridge. The new pedestrian bridge Stout designed to cross a major thoroughfare and link the museum with the aquarium and downtown works as a linear extension of this network of terraces.

Stout anchored the 45-foot-high lobby (above and opposite) with a sculptural element that integrates a reception desk with a stair (top right) and internal bridge. New galleries present temporary shows (above right).

Inside his addition, Stout created an intriguing dialogue between blocky forms containing destinations (such as galleries and an auditorium) and sinuous elements serving as circulation spaces. The two realms meet in the soaring lobby where a reception desk, stair, and bridge converge to form a remarkable piece of architectural sculpture that is as beautiful as any artwork in the museum. It also serves as a neat wayfinding device, clearly identifying how to get upstairs or to the older parts of the museum. All of the complex geometric elements—including the stainless-steel stair and interior bridge and the building's roof—were fabricated by A. Zahner (which has worked with Frank Gehry on many projects), using 3D drawings, and then trucked to the site from Kansas City.

Stout placed 4,800 square feet of new galleries for temporary exhibitions on the second floor of his addition, giving them 16-foot-high ceilings and maple floors. A movable partition between the galleries allows them to work either as one or two spaces. A terrace off these galleries offers an attractive place to pause and appreciate an Albert Paley fence that has been moved here from the old museum. In renovating the existing museum, Stout placed all of the permanent collection on one floor, making a more seamless experience for visitors. He also added skylights to an old sculpture terrace behind the mansion to bring daylight to spaces below and moved the sculptures to landscaped areas in front of the museum so they could be on public display all of the time. In terms of back-of-the-house functions, he made critical improvements, adding two new art elevators, an enclosed loading dock, sophisticated art storage, a catering kitchen, and an energy-management system.

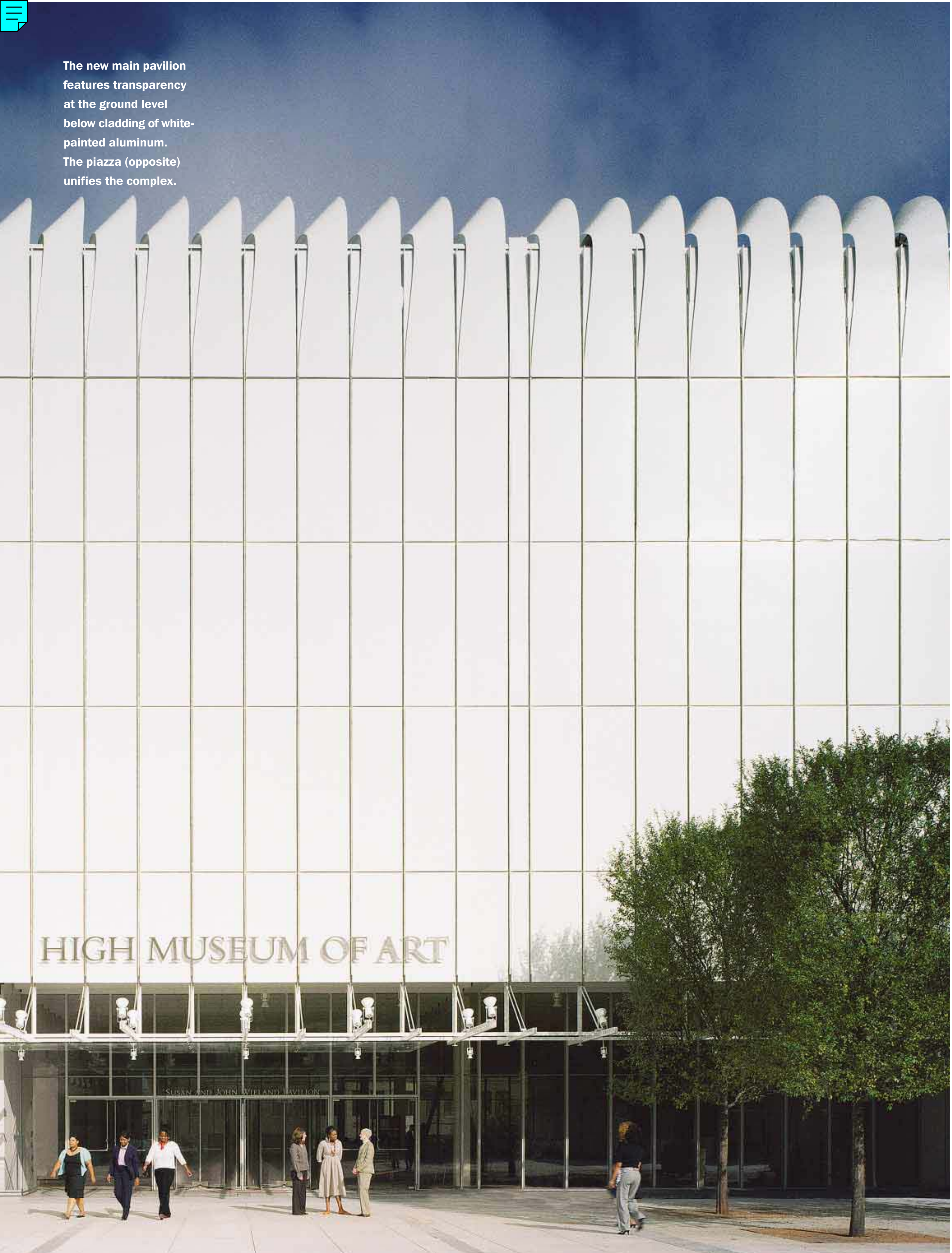
Like so many new museum buildings these days, Randall Stout's addition to the Hunter offers enough razzle-dazzle to grab the public's attention and radically update an old institution's image. Having worked for Frank Gehry, Stout knows how to deliver an exciting, iconic design. But unlike a lot of other architects brought in from afar, he has roots in this particular place and has been able to tap into them to create a building that emerges from its site, not just struts on top of it. ■

Sources
Structural steel: *Superior Steel*
Curtain wall: *ASI; Kawneer*
Zinc cladding and stainless-steel roofing: *A. Zahner Company*
Glazing: *Viracon*
Skylights: *Kawneer*
Fabric ceiling: *Wall Technology*

For more information on this project, go to Projects at **www.archrecord.com**.

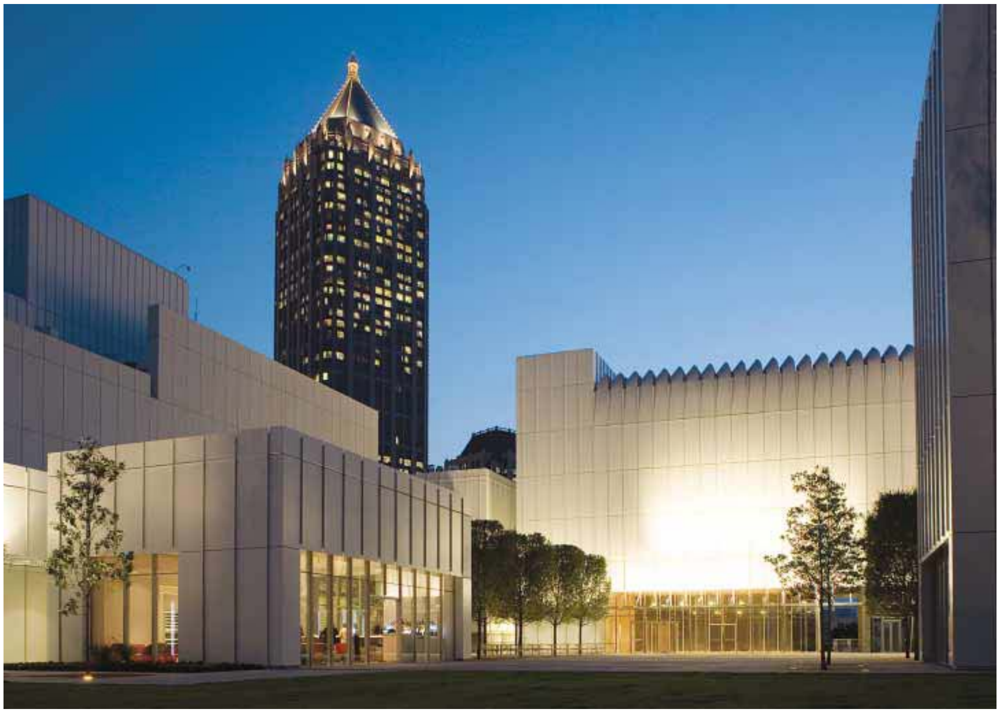
PHOTOGRAPHY: COURTESY RANDALL STOUT (BOTTOM RIGHT)

The new main pavilion features transparency at the ground level below cladding of white-painted aluminum. The piazza (opposite) unifies the complex.


HIGH MUSEUM OF ART
SUSAN AND JOHN WIELAND PAVILION

Renzo Piano Building Workshop doubles the size of the HIGH MUSEUM in Atlanta, embracing Richard Meier's original building with a villagelike campus for culture

By William Weathersby, Jr.



PHOTOGRAPHY: © JONATHAN HILLYER

When Richard Meier's building for the High Museum of Art opened in Atlanta in 1983, the design put the museum on the national cultural map. Previously housed in a warren of galleries in the unremarkable concrete behemoth Memorial Arts Center nearby, the museum moved into light-filled galleries surrounding a central atrium that Meier acknowledged alluded to Wright's seminal Guggenheim Museum in Manhattan. The white porcelain-paneled exterior gleamed in the sunlight. Critics called the High "a museum finally big enough for Atlanta," and, as Margaret Gaskie wrote then [RECORD, January 1984, page 118], the museum was "undeniably a jewel and Meier's finest work to date."

Flash forward more than two decades. Over the years critics complained that the High's atrium created glare, its circulation routes were awkward, and some galleries really did not showcase art very well. While Meier's building indeed remains a sculptural presence in the landscape, it now has become only one compass point in a remarkable new arts campus that is poised to enhance this north Atlanta neighborhood. This month, the High debuts three new buildings designed by Renzo Piano Building Workshop. With pavilions fanning out from a central public piazza, Piano's design expands the High into more than a one-stop museum site. Following through on his own 30-year master plan for the Woodruff Arts Center (which in addition to the High also includes the Alliance Theater, the Atlanta Symphony, and the Atlanta College of Art on the 8.5-acre site), the architect has built a veritable village of culture. Piano's complex does not overpower the Meier building; rather, the quietly handsome new structures create a counterpoint to it, orchestrating a dialogue in the same architectural language of scale, detailing, and white cladding. In this case, bigger seems so much better.

More than doubling the museum's size to 312,000 square feet, Piano's scheme can't really be called an addition. "Rather than designing a museum, we wanted to create a sense of place," Piano says, "an urban destination that extends the streetscape and welcomes pedestrians onto the campus from multiple vantage points." (Piano, handpicked by the museum administration to succeed Meier, worked in collaboration with Atlanta-based architect Lord, Aeck & Sargent. Two-years ago, Piano completed the first leg of the project with a new 75-room dormitory and studio building for the Atlanta College of Art adjacent to the site of the museum administration building. It serves as the southern gateway at one corner of the site.)

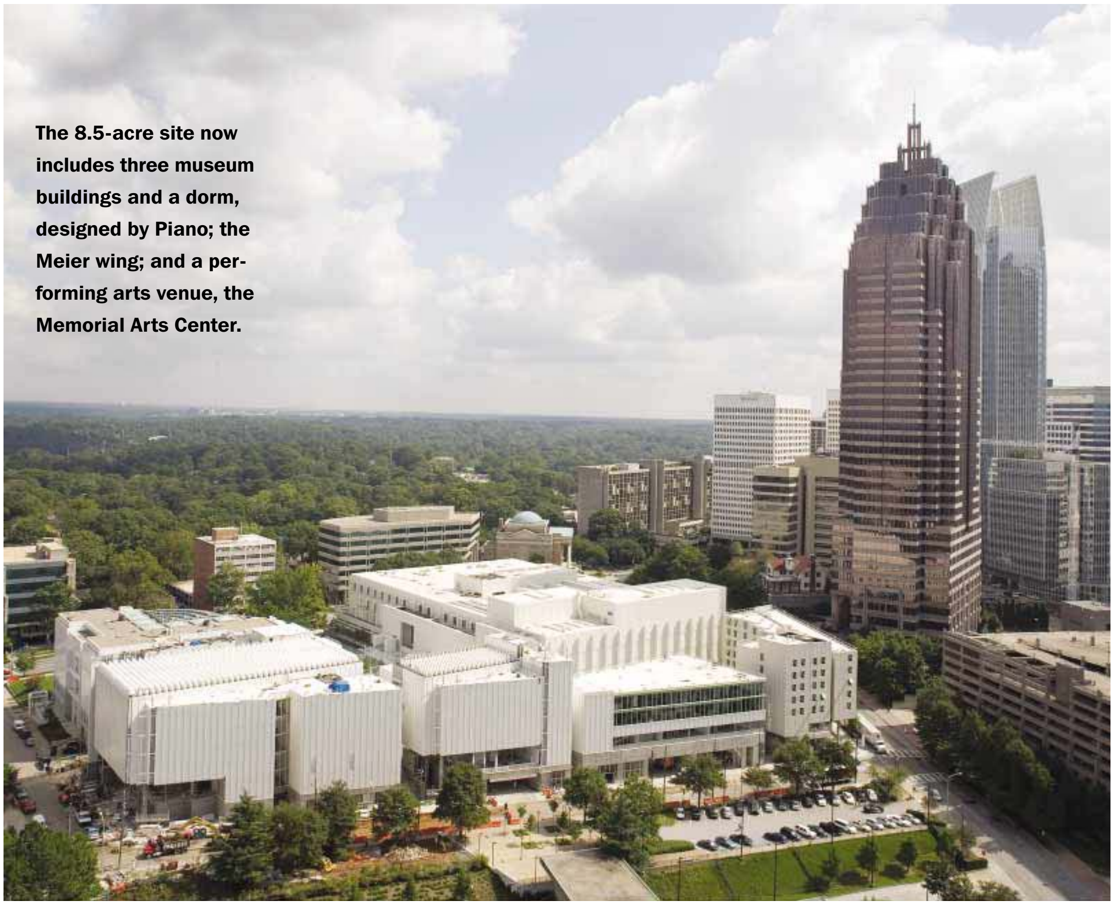
The centerpiece of Piano's plan is a 160-foot-by-110-foot public piazza that brings new focus to the Woodruff Arts Center campus. The architect says the scale of this central meeting place was influenced by the Piazza San Matteo in his home base of Genoa. Sitting atop a 400-car parking garage, the piazza creates a concrete-and-stone plinth from which the new buildings rise. The expansion encompasses three discrete buildings: the John F. and Susan W. Wieland Pavilion housing the main galleries; the Anne Cox Chambers Wing for special collections; and the Administrative Center of museum offices. Piano designed the new buildings to complement the Meier building, but not mimic it. All three

Project: *High Museum, Atlanta*
Architect: *Renzo Piano Building Workshop in collaboration with Lord, Aeck, & Sargent*
Engineers: *Arup; Uzun & Case Engineers; Jordan & Skala Engineers; HDR (civil)*
Project manager: *Jones Lang LaSalle*
Construction: *Skanska Russell, a joint venture*

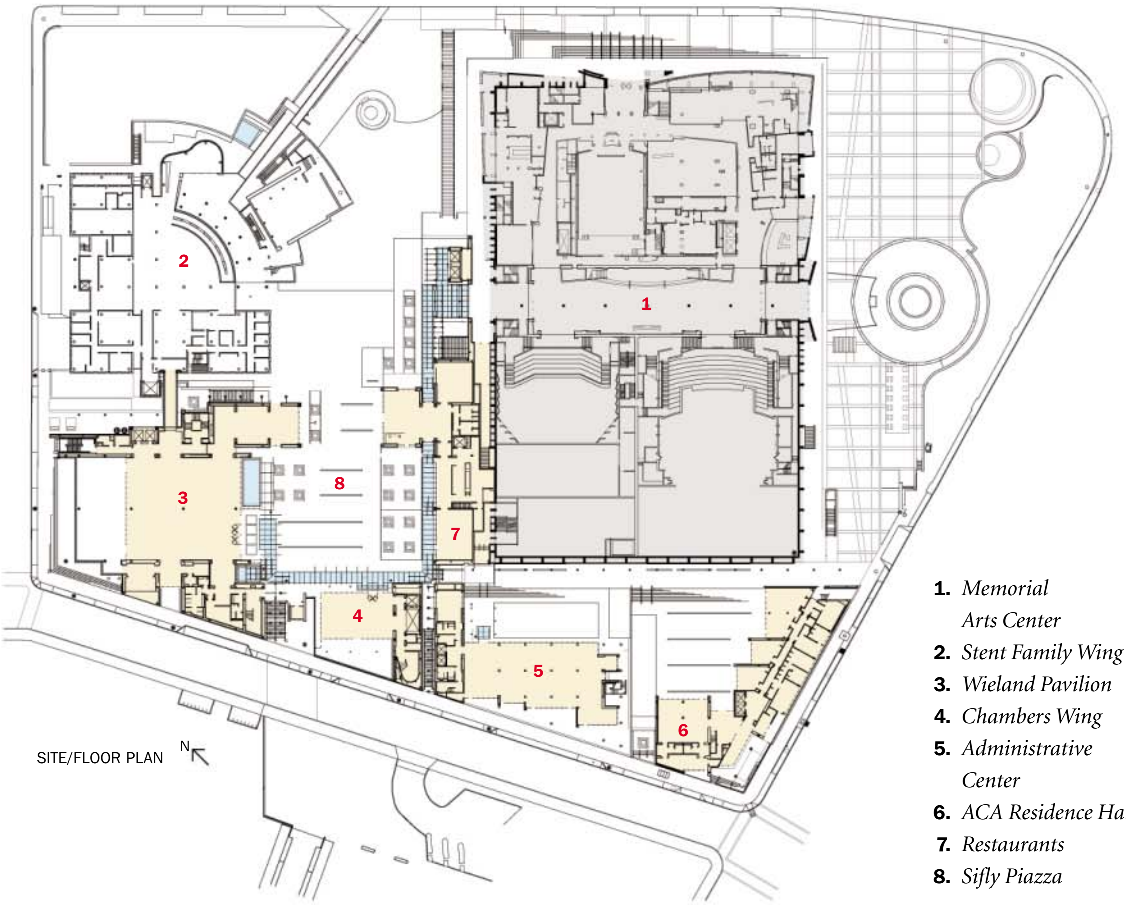
Thinking big: Michael Shapiro

In October, High Museum of Art director Michael E. Shapiro was in New York with a museum curator on a shopping spree. “We just bought another Gerhard Richter,” he said, alluding to another acquisition his team had made to fill out a new gallery dedicated to the artist’s work. Shapiro had every right to be proud. By November 2004, he had already announced that the High had surpassed its capital goal of raising $130 million, a full year before the expanded museum was scheduled to open. $85 million was earmarked for construction costs, $15 million funded a museum endowment, and $30 million went toward additional Woodruff Arts Center expansions and upgrades. Lead gifts in the drive included a $12 million donation, the largest gift in the High’s history, from former museum board chairman John Wieland and his wife, Susan. Other insiders leading the campaign were current board chairman Terry Stent and his wife, Margaret, and longtime trustee Anne Cox Chambers. The three families have museum buildings named in their honor.

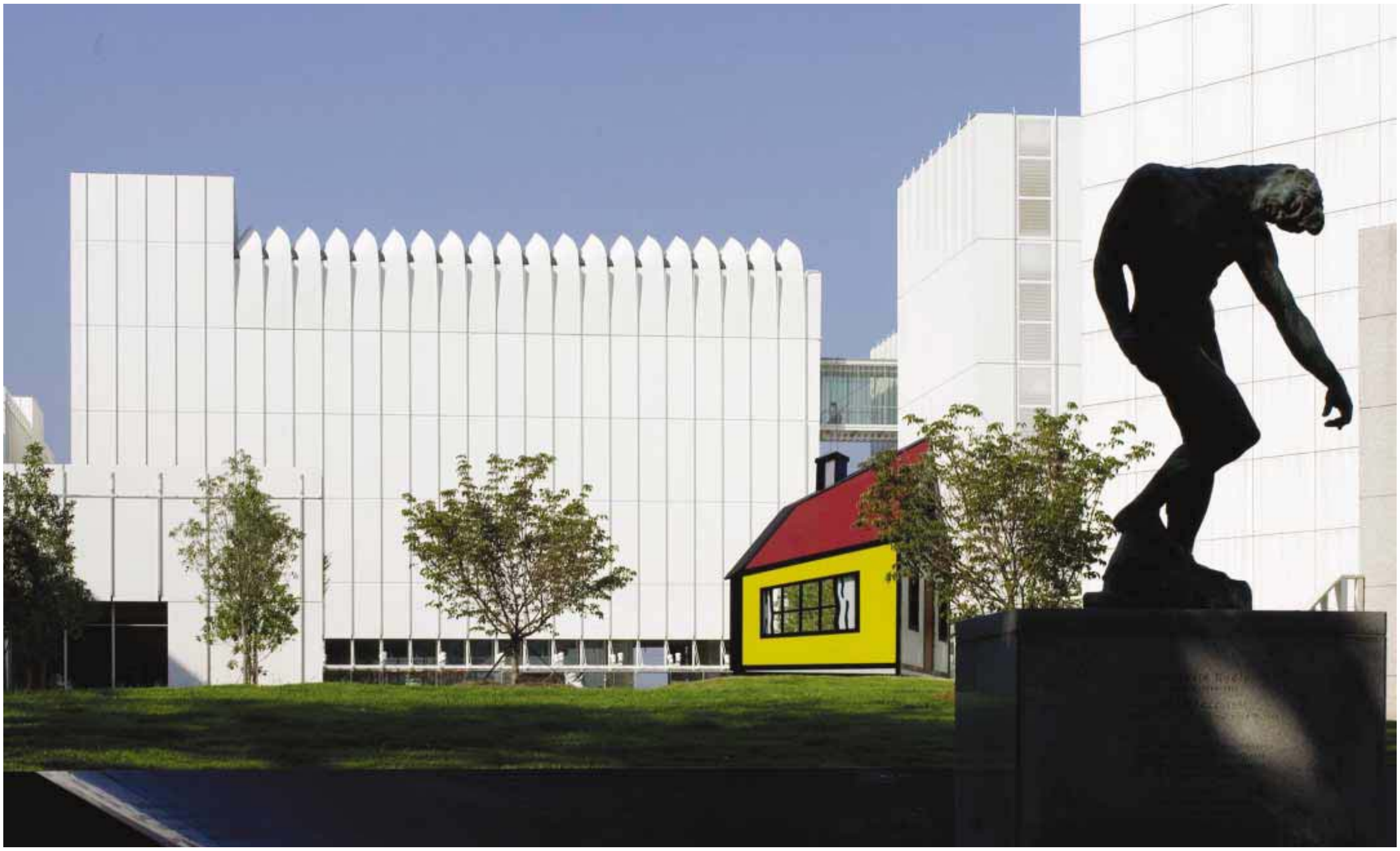
The patrons also took an active role in scouting Piano’s work with Shapiro prior to the High commission, touring the architect’s museum projects from Houston to Basel, Switzerland. “With more than 11,000 works of art in our collection, we had long outgrown our building,” Shapiro says. “The High was the seventh-largest museum in the country, in terms of membership and attendance, but operating in the 59th-largest space,” he says. “We went with Piano because of the scale of his work and his attention to detail. Plus, he convinced us to build three buildings to address specific functions. He solves problems you never knew you had.” *W.W.*



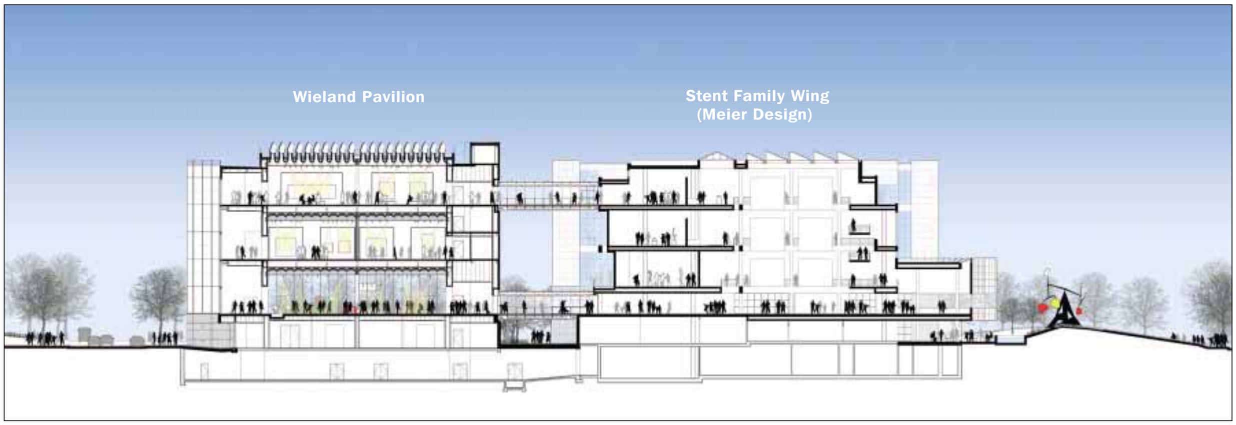
The 8.5-acre site now includes three museum buildings and a dorm, designed by Piano; the Meier wing; and a performing arts venue, the Memorial Arts Center.

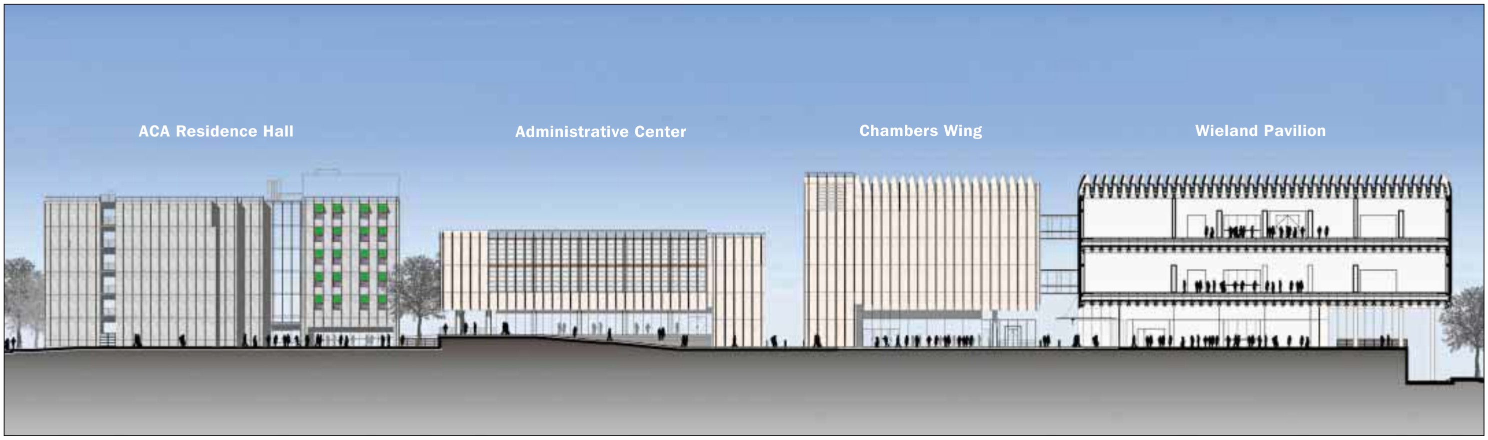


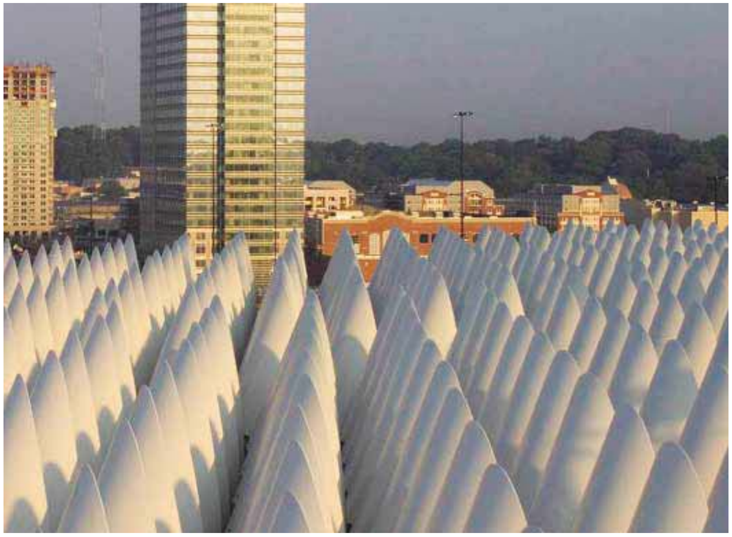
1. *Memorial Arts Center*
2. *Stent Family Wing*
3. *Wieland Pavilion*
4. *Chambers Wing*
5. *Administrative Center*
6. *ACA Residence Hall*
7. *Restaurants*
8. *Sifly Piazza*



Roy Lichtenstein's sculpture *House III* joins Auguste Rodin's *The Shade* (above) on the lawn between Piano's pavilions (above, at left) and the Meier structure (above, far right).


Wieland Pavilion
Stent Family Wing
(Meier Design)


ACA Residence Hall
Administrative Center
Chambers Wing
Wieland Pavilion



For the new museum restaurant (left), the Woodruff Arts Center commissioned an illuminated artwork by Spencer Finch. Light scoops atop the new gallery roofs (above) filter northern light into loftlike galleries. Additional skylights (right) can be temporarily masked to adjust daylight levels.

concrete-slab structures are clad in white-painted aluminum panels fitted into steel framing members.

Providing a new central entry for the museum, the 103,000-square-foot Wieland Pavilion borders the northwestern edge of the piazza, beyond a stretch of lawn that embraces Meier's building to the east. The three-level building houses works from the museum's Modern and Contemporary collections and will host special exhibitions. On the lower level, new galleries are dedicated to African art, photography, and works on paper, the first such facilities for the High.

At the ground-floor entry level to the Wieland, Piano has achieved a captivating degree of transparency. From the piazza, visitors can peer through the glass cladding, across the entry lobby, past additional windows looking onto a terrace (now graced with a newly acquired Oldenberg), then beyond to the brick buildings along 16th Street. "I wanted visitors to get a sense of where they are in the city at vantage points on every floor," Piano says.

Though the new museum buildings rise to the same height as Meier's structure, Piano's pavilions feature three floors rather than four above ground; the added height on each floor creates 17-foot-high, loftlike spaces for displaying large-scale contemporary art. One new gallery is dedicated to paintings by Ellsworth Kelly, for example, while another exclusively showcases works by Gerhard Richter.

Connecting the new galleries to the Meier building was one main challenge. Piano says he and Meier met and sketched on a napkin the west-side juncture of the existing building (now renamed the Stent Family Wing) where they agreed the buildings would make contact. Bisecting an existing freight elevator tower and removing some utility transformers, Piano created an aperture for passageways into the original structure. With doors now thrown open at each end of a glass-enclosed sky bridge that connects the Wieland Pavilion to the original building, the sight lines catch the eye. Museumgoers can stand in one of the new contemporary galleries, look through the Meier interiors, and then out the windows overlooking Peachtree Street.

Adjacent to the Wieland Pavilion to the southeast, the 35,000-square-foot Chambers Wing presents special exhibitions. Both new museum buildings feature a roof system of light scoops that capture northern daylight and filter it into the upper-level galleries. Light fixtures also designed by Piano elegantly blend into the vaults of the ceiling.

On the piazza's eastern edge, a new restaurant pavilion fronts the Memorial Arts Center complex. Piano also upgraded the center by removing its colonnade and masking the bulky structure with panels. Meanwhile, the Meier building was renovated in 2003, and its skylights were adjusted to again light the interiors. The building will house the High's permanent collection and an education and activity center. Next to Piano's interiors, the Meier spaces today still seem hemmed in, but perhaps speak of their era. Taking a supporting role in the new cultural campus, however, the building is a fascinating milestone that marks the institution's past. Piano's new pavilions assure its future. ■

Sources

Exterior aluminum panels: *Harmon/Linel*

Concrete: *LaFarge North America*

Wood flooring: *AAA World Floors*

Skylights: *Viracon*

Motorized sunshades: *Arquati*

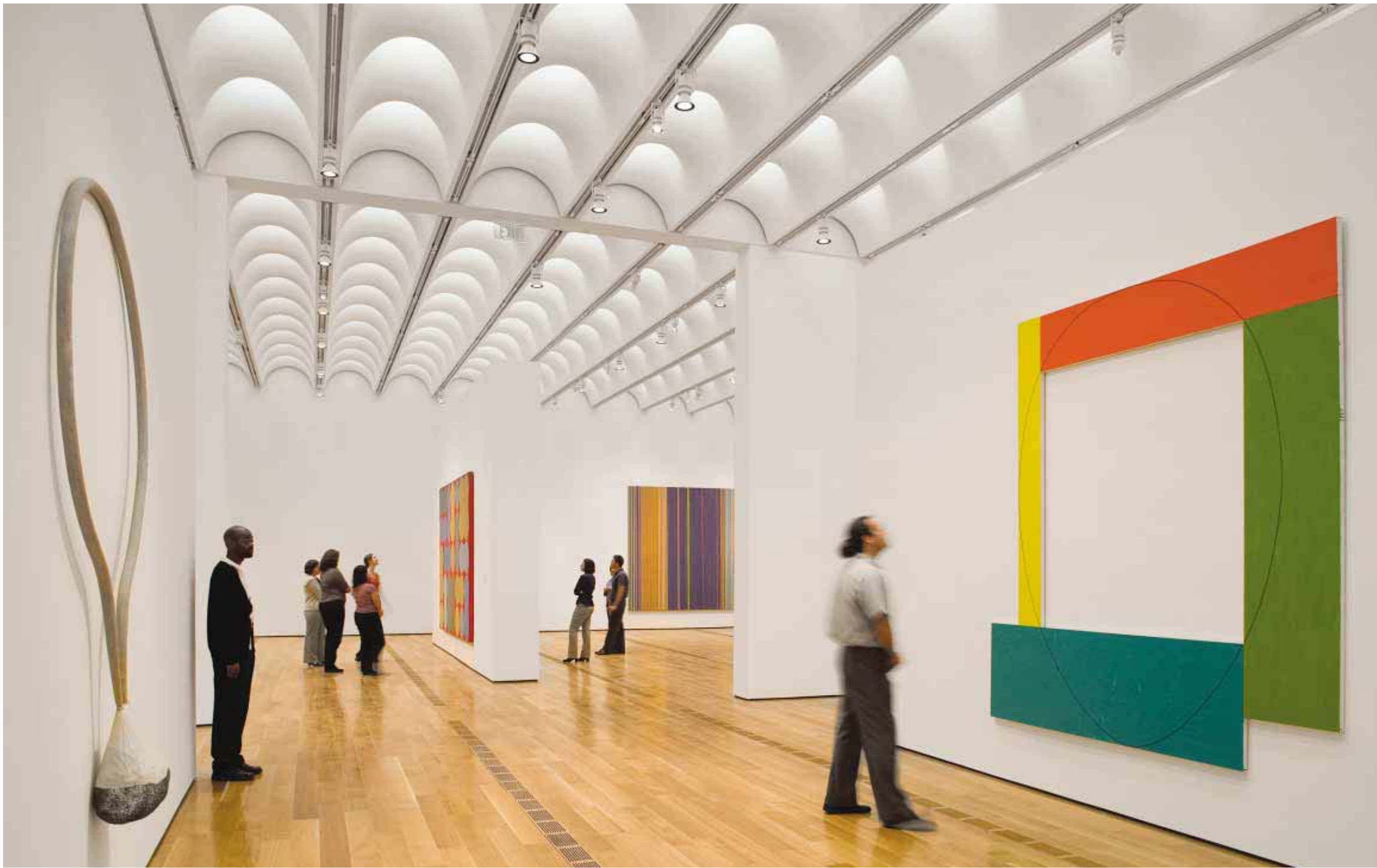
HVAC, controls: *Trane*

Gallery lighting: *IGuzzini*

Lighting controls: *Lithonia Lighting*

For more information on this project, go to Projects at **www.archrecord.com**.

A gallery highlights works by Tony Smith and Alfred Jensen (top). Another gallery housing large-scale art (bottom) is awash in daylight.



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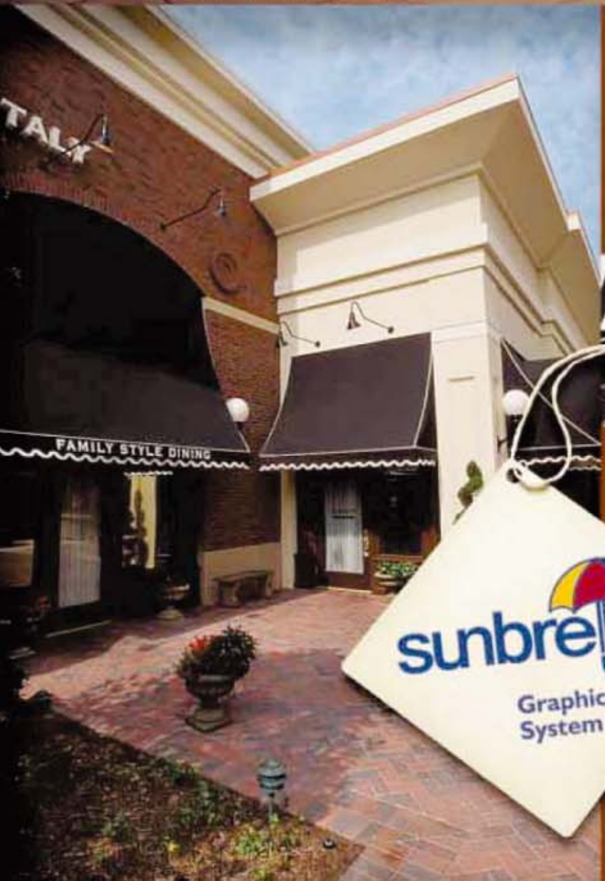
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Design architect: Bernard Tschumi Architects, New York, NY and Paris, France
Architect of record: glaserworks, Cincinnati, OH

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Hotel Restaurants

Making the Scene

ONCE FRUMPY AND OVERLOOKED, HOTEL RESTAURANTS TODAY COMMAND ATTENTION WITH INVENTIVE DESIGNS THAT HELP GENERATE BUZZ AND BRING IN THE LOCALS.

1.

Las Vegas, Nevada

Yabu Pushelberg used video, lighting, and an inventive mix of materials to create a modern Japanese dining experience at Shibuya.

2.

Hamburg, Germany

Old and new meet at the East Hotel, where Jordan Mozer has transformed an abandoned iron foundry into a hip place to eat, drink, and sleep.

3.

Las Vegas, Nevada

Patrick Jouin treated the lounge and restaurant at Mix in THEhotel as very different spaces, one with a fiery core and the other with a bubbly air.

4.

Seoul, South Korea

With public spaces by Studio Gaia and restaurants by Tony Chi, the W Hotel has become a hot destination in the Walkerhill area of Seoul.

5.

Munich, Germany

Helmut Jahn and Yorgo Lykouria designed the sleek Innside Premium Hotel to attract business travelers with a sense of style.

PHOTOGRAPHY: © DAVID M. JOSEPH (1); DOUG SNOWER (2); ERIC LAIGNEL (3); SEUNG HOON YUM (4); TOM VACK (5)

By Clifford A. Pearson

If you mentioned hotel restaurants not long ago, most people would think of overpriced food and stodgy decor. With a built-in clientele of hotel guests who often chose convenience over quality, these in-house dining establishments rarely offered anything beyond the expected and the safe. All that began to change when Ian Schrager shook up the hotel world in the 1980s and made food an important part of the scene he set in motion at properties like Morgans, the Royalton, and the Delano. His boutique hotels were the first to turn their restaurants into destinations for the "in" crowd, most of whom weren't staying in rooms upstairs. Eventually, even the big hotel chains and casino operators began to see restaurants as more than just part of the required mix of guest services. All of a sudden, getting the hot chef and the right architect became critical pieces of a hotel's business plan.

Fast forward a couple of years. What just recently had caché has become a cliché. Now designers are frantically competing in a game of architectural one-upsmanship to concoct the most visually amazing places to dine. New materials, spectacular lighting, colors that change—all show up in today's make-it-hot playbook. The challenge now is to create restaurants that impress without knocking people out or resorting to design tricks or tics.

The projects shown here represent a cross section of work being done today. At Shibuya, deep inside the MGM Grand in Las Vegas, architects Yabu Pushelberg interpreted Japanese culture by focusing on the modern rather than the traditional, the big city, not the quaint countryside. Down the road from Shibuya in another large hotel, Mix faced a very different set of issues. Its location on top of THEhotel endowed the restaurant and lounge with fantastic views, allowing designer Patrick Jouin to relate his choice of materials, colors, and imagery to the surrounding desert and mountains. In Hamburg, Jordan Mozer got the chance to design all of the interiors of the East Hotel, using the redbrick envelope of an abandoned iron foundry as a gritty foil for his dreamscape of animated forms and colorful furniture. At the W Hotel in Seoul, Studio Gaia turned the lobby and public areas into a multilayered party space, while Tony Chi and Associates created quieter settings for the hotel's two restaurants. In Munich at the Innside Premium Hotel, Jahn Lykouria took some of the stuffing out of the business hotel and gave it design smarts instead. Hotels and their restaurants have come a long way from stodgy. ■

For more information on these projects, go to Building Types Study at **www.archrecord.com**.

Shibuya
Las Vegas, Nevada

1

YABU PUSHELBERG BRINGS MODERN, URBAN JAPAN TO LIFE AT A COLORFUL RESTAURANT DEEP INSIDE A GIANT CASINO HOTEL.

By Clifford A. Pearson

Designer: *Yabu Pushelberg—George Yabu, Glenn Pushelberg, Mary Mark, Reg Andrade, Anson Lee, Paul Pudjo, Mika Nakaza, Sunny Leung, Alex Edwards, project team*
Client: *MGM Grand Hotel & Casino*
Architect: *Leo A Daly*
Engineers: *Finnegan Erickson Associates (mechanical); RHR Consulting Engineers (electrical)*
Consultants: *Isometrix (lighting); James Robertson Art Consultants (art)*
General contractor: *Penta Building Group*

Size: *7,000 square feet, 220 seats*
Completion date: *July 2004*

Sources
Bentwood dining partitions: *Custom by Hirotoshi Sawada*
Pine bento-box wall screens: *Custom by Lolah*
Acrylic wall panels: *Marc Littlejohn*
Tempered glass with etched bar code: *Sound Solutions*
Stone countertop in tepanyaki area: *Hiltz Marble and Granite*
Chairs and tabletops: *Custom by Eric Brand Furniture*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

Forget geishas, Zen temples, and quaint wooden houses in Kyoto. Think high-tech gadgets, anime, and big-city streets ablaze with commercial lighting. That's what the people behind Shibuya did when they created a restaurant in Las Vegas named after one of Tokyo's busiest neighborhoods.

Program

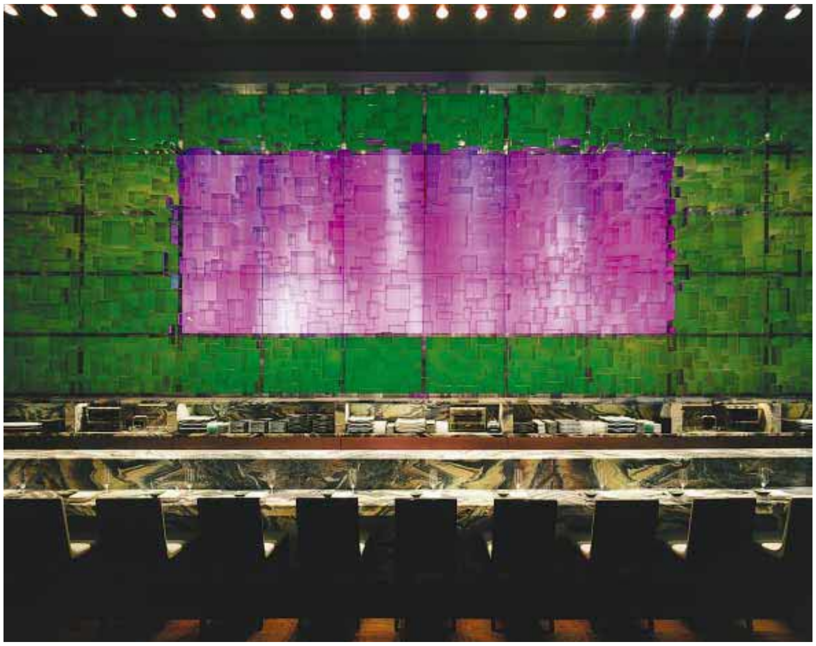
Tucked inside the gigantic MGM Grand Hotel and Casino (which has more than 5,000 guest rooms and five swimming pools) along a broad corridor that leads to a series of other restaurants and shops, Shibuya faced the difficult challenge of attracting attention without screaming above the visual din. And like many restaurants in Las Vegas, it is a totally interior environment with no access to daylight. Designers Yabu Pushelberg also needed to wrestle with the size of the place, which at 7,000 square feet could feel cavernous, especially when less than full of diners. Luckily, the Toronto-based firm, which has designed such well-regarded establishments as the Times Square W Hotel in New York [RECORD, September 2002, page 154] and the Four Seasons in Tokyo [RECORD, June 2003, page 227], had extensive experience in creating lively but sophisticated interiors. And the client (MGM Grand) wanted the restaurant to have a range of dining types—including a sushi bar, traditional table service, a semiprivate dining area, and tepanyaki grills—which created the opportunity to break down the sprawling space into smaller areas.

Solution

"In America, there's a kind of aesthetic that people expect at a Japanese restaurant—washed river stones, natural materials, and shoji screens," says firm principal Glenn Pushelberg. "But for Shibuya, we wanted to show the Japan of today—the dichotomies of modern life, the intensity of the big cities. They have a different sense of color in Japan, but Japanese restaurants in the U.S. always seem to have neutral color schemes."

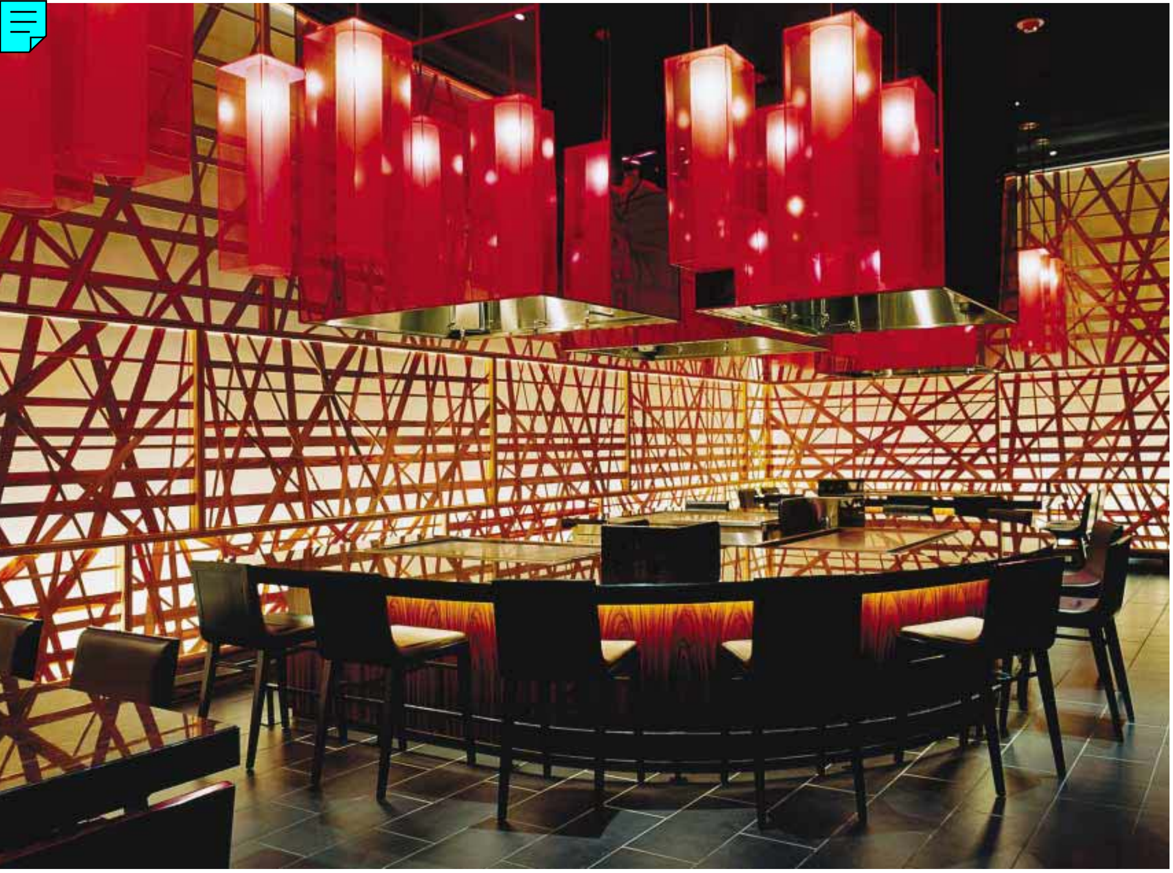
No such problem at Shibuya. As visitors walk along the corridor in front of the restaurant, they get an eyeful of electric color, thanks to a 50-foot-long wall of LED and video panels set behind the sushi bar. The video screens in the center of the wall show animated images of fish and the underwater world, while the LED panels surrounding them slowly change hue.

To enhance the theatrical effect and tone down the chromatic intensity, the designers treated the

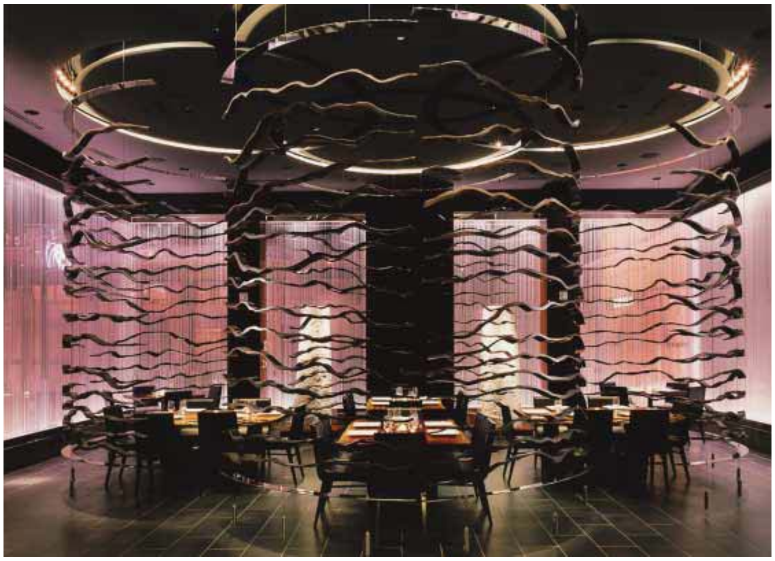


PHOTOGRAPHY: © DAVID M. JOSEPH

A glass wall etched with lines resembling a bar code acts as a veil separating the restaurant from the casino corridor (right and below). LED and video panels above the sushi bar change colors (opposite and this page).



Tepanyaki grills anchor one end of the "bento box" and feature tall pendant lights and stainless-steel exhaust hoods (above). Circular screens of cascading wood ribbons by the artist Hirotoshi Sawada provide privacy in another room (right).

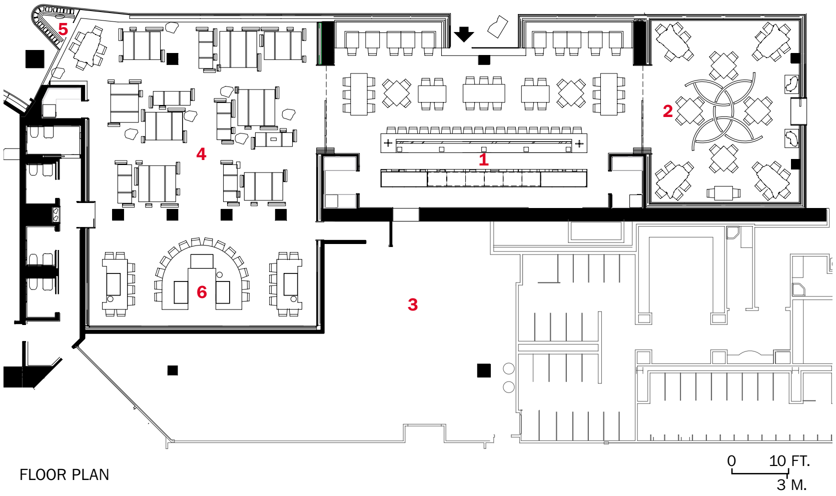


150-foot-long glass wall separating the restaurant from the corridor as a see-through veil, imprinting large vertical bar codes on the lightly tinted glass. "In Tokyo, you find an intense degree of layering—cars, people, buildings, lights, and signage," explains Pushelberg. "And there are lots of applied surfaces in Japanese design. In pottery and fabrics, for example, you'll see one pattern laid right on top of another. We wanted to evoke that same kind of layering here."

Diners enter the restaurant at the central section with the sushi bar and video wall and then can go to either a semiprivate dining room screened by cascading ribbons of bentwood suspended from the ceiling or a room that Pushelberg calls the "bento box." The latter features a perimeter made of criss-crossing strips of pine set within three horizontal bands that look as if they could be lifted up like the food trays of a bento box. Rippling streams of bent wood serve as see-through partitions between tables and give the impression of abstracted sections of seaweed hanging from above. The designers pushed the tepanyaki counters to the back of the bento box, but gave them their own identity with large pink stainless-steel hoods above the grills.

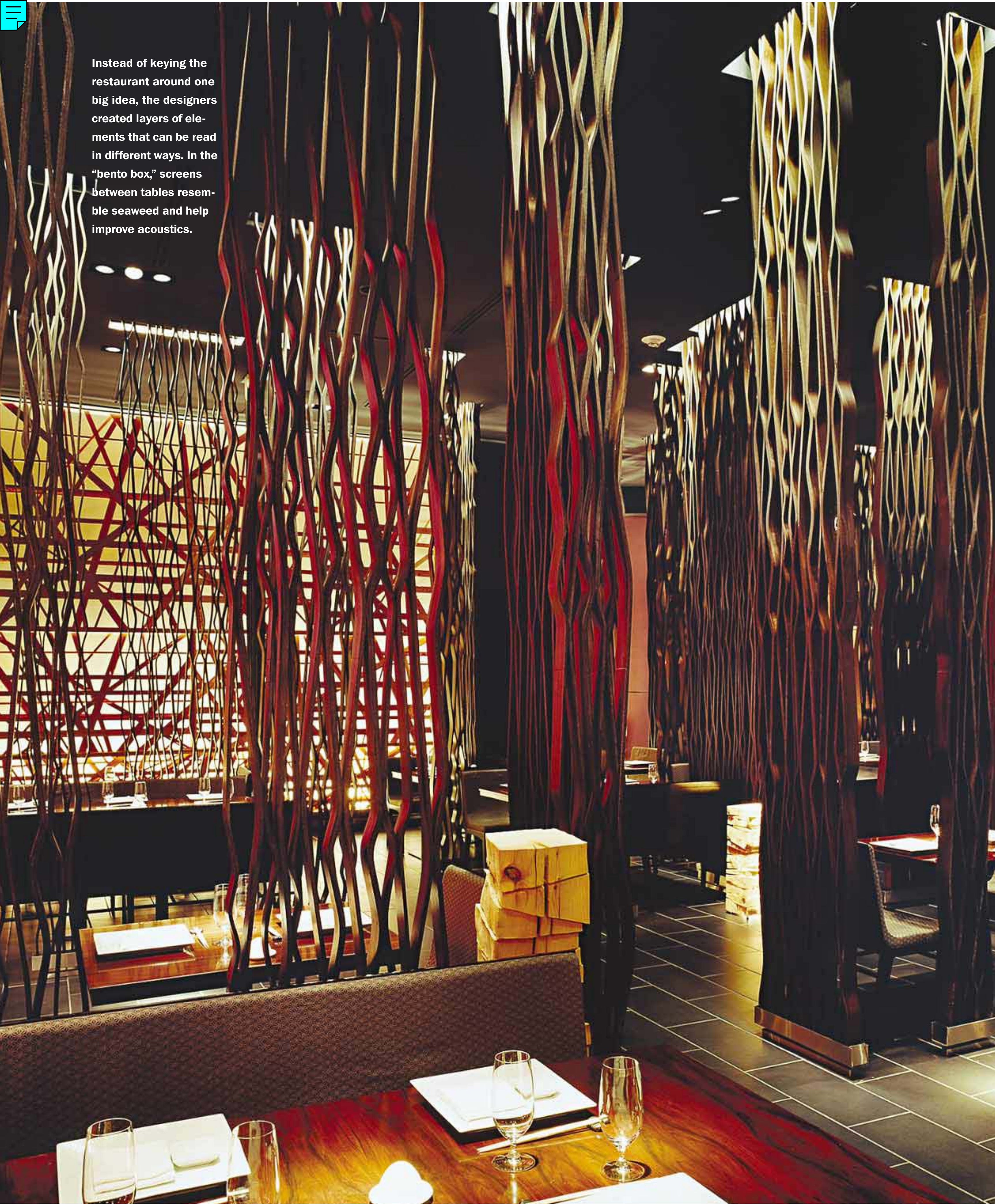
Commentary

While the notion of "theming" has infected much of Las Vegas (and the hospitality world in general), Yabu Pushelberg has pushed design one or two steps beyond this commercial/entertainment cliché. By abstracting its references to Japanese culture and eschewing hackneyed visual cues (no fans or even calligraphy here), the firm has given Shibuya a sophisticated look that still has a sense of fun. The colors, the video, the energetic use of materials make customers forget they're in a big space with no daylight. Yes, the layering and surface effects sometimes border on the excessive, but they never quite cross the line. This is Vegas, after all, and you had better have some sizzle to your show. ■



FLOOR PLAN

1. *Sushi bar*
2. *Private dining*
3. *Kitchen*
4. *Bento box*
5. *Sake cellar*
6. *Tepanyaki grills*



Instead of keying the restaurant around one big idea, the designers created layers of elements that can be read in different ways. In the "bento box," screens between tables resemble seaweed and help improve acoustics.

East Hotel Restaurant

Hamburg, Germany

2

JORDAN MOZER TOOK AN OLD FOUNDRY IN A SEEDY PART OF TOWN AND TURNED IT INTO AN ÜBER-HIP PLACE TO EAT AND SLEEP.

By Farhad Heydari

Design architect: *Jordan Mozer & Associates—Jordan Mozer, Jeff Carloss, Beverlee Mozer, Tim Schwarz, Matt Winter, Larry Traxler, Adam Otscheretiany, project team*
Architect of record: *Masterplan + Kreye und Partner—Thomas Kreye, Edgar Stofferson, Katrin Wagner, project team*
Consulting architect: *Udo Ulrich (kitchen planning)*
Management team: *Christoph Strenger (restaurant developer); Marc Ciunas (bar developer); Anne Marie Bauer (general manager, hotel); Thomas Kreye (real estate developer)*
Design builder: *Kreye und Partner*

Size: *250 seats (restaurant); 70 seats (bar); 20 seats (lobby bar); 50 seats (Smirnoff Lounge); 33 seats (Beanbag Lounge); 77 guest rooms*
Completion date: *November 2004*

Sources
Furniture and lighting: *Custom designed and fabricated by Jordan Mozer & Associates*
Smoked oak parquet flooring: *Bembé-Parkettfabrik*
Carpeting: *Masland Contract*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

As the grayest—and possibly dreariest—city in Germany, Hamburg has always been ruled by the elements, be they sea winds or incessant rain. In response, architects have speckled the city center with angular steel-and-glass facades meant to catch the errant ray of sun, and enlivened the buildings with brightly lit indoor passages aimed at keeping people from venturing outside. So it's no surprise that Europe's second-largest port has morphed into something of an experimental playground for designers using splashy interiors to spruce up the city's otherwise colorless milieu.

Having created eye-popping restaurants such as the the Cypress Club in San Francisco and Nectar in Las Vegas, Chicago-based designer Jordan Mozer is now leaving his mark in Hamburg. His East Hotel—a cutting-edge yet ludic transformation of a brick iron foundry just off the city's notorious Reeperbahn red-light district and two blocks away from the club where the Beatles got their start—has been drawing long lines of revelers since it opened in November 2004.

The hotel is the second collaboration between Mozer and the Hamburg-based restaurant-bar group Gastro Consulting, coming shortly after the completion of a nearby bar called Herzblut, which has also been a big hit.

Hamburg-based Farhad Heydari writes for Time and other publications.

Program

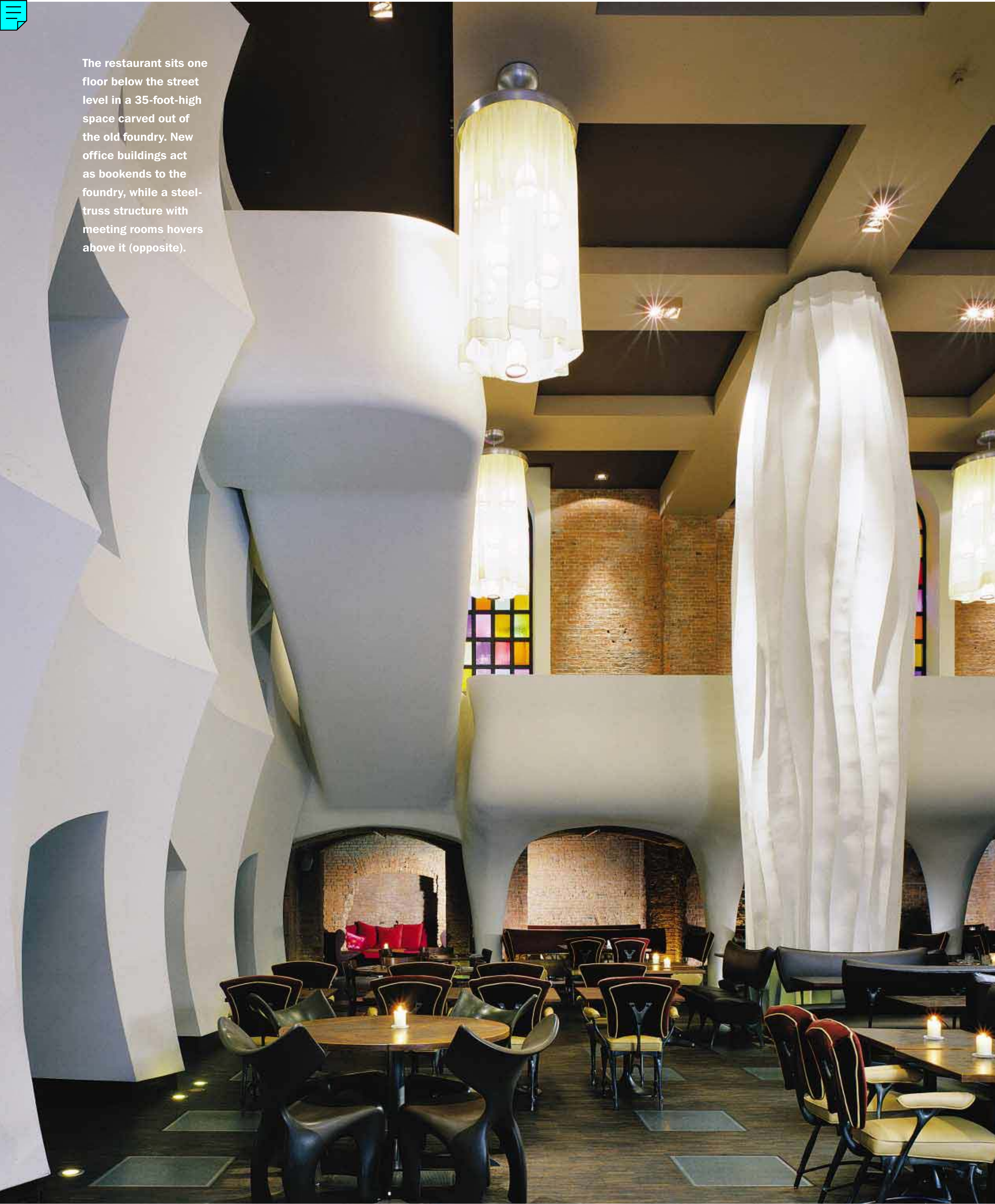
Given an abandoned foundry in the rapidly gentrifying St. Pauli district, Mozer was asked to create a boutique hotel with 77 guest rooms, several lounges and bars, and a large Asian-European fusion restaurant. The client team of real estate developer Thomas Kreye, restaurant entrepreneur Christoph Strenger, and bar developer Marc Ciunas requested theatrics for the interiors in order to woo Hamburg's clued-in night owls, who would make up the lion's share of customers in the public spaces.

Solution

Mozer began by removing four bays of vaulted brick from the middle of the old foundry, carving out a cavernous 35-foot-high room that he linked via four sets of 28-foot-tall glass doors to a new courtyard behind the building. Twelve guest rooms occupy two split-level floors in the foundry above the grand central space. A new building set behind the courtyard houses 65 guest rooms, a rooftop spa, and 60 underground parking spaces. New office buildings stand on either side of the foundry, while a two-story glass-and-steel truss structure housing hotel meeting rooms hovers above the foundry.

To animate the 250-seat main dining room, Mozer fashioned a quartet of fat, undulating columns and a wavy, neo-Cubist plaster wall with openings leading to intimate dining spaces set into the sandblasted brickwork of what had been the foundry cellar (and now is the

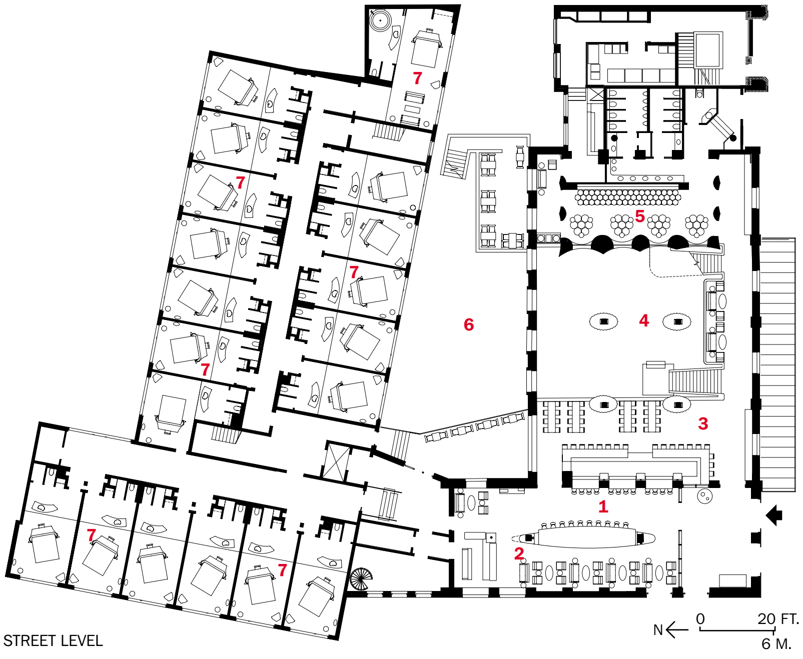
PHOTOGRAPHY: © DOUG SNOWER, EXCEPT AS NOTED; MARTIN SHEENAN (THIS PAGE)



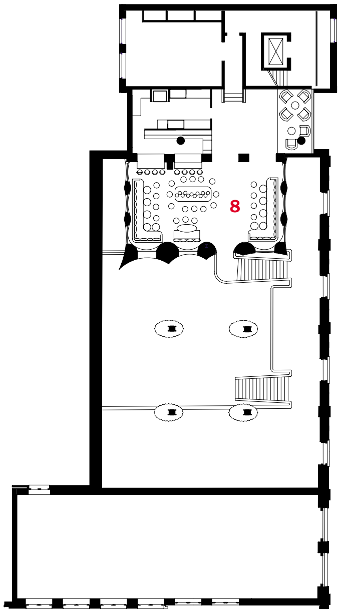
The restaurant sits one floor below the street level in a 35-foot-high space carved out of the old foundry. New office buildings act as bookends to the foundry, while a steel-truss structure with meeting rooms hovers above it (opposite).

On the street level, Mozer created a series of spaces with different personalities. The Beanbag Lounge (above left) uses color and plush forms to create a cushy setting, while the lobby bar (above right) sets an edgier tone by contrasting the new with the old.

1. *Lobby*
2. *Registration*
3. *Bar*
4. *Restaurant (below)*
5. *Beanbag Lounge*
6. *Garden (below)*
7. *Guest room*
8. *Smirnoff Lounge*



STREET LEVEL



UPPER LEVEL

restaurant level of the hotel). One flight up, visitors enter the hotel from the street and can hang out at a lobby bar or two lounges overlooking the restaurant. Yet another drinking venue, the Smirnoff Lounge, perches a flight above the street and two above the dining floor.

"We wanted a contrast between old and new, which is why we painstakingly retained the foundry shell," says Mozer of the historic and once-graffiti-covered structure he first laid eyes on in 2001.

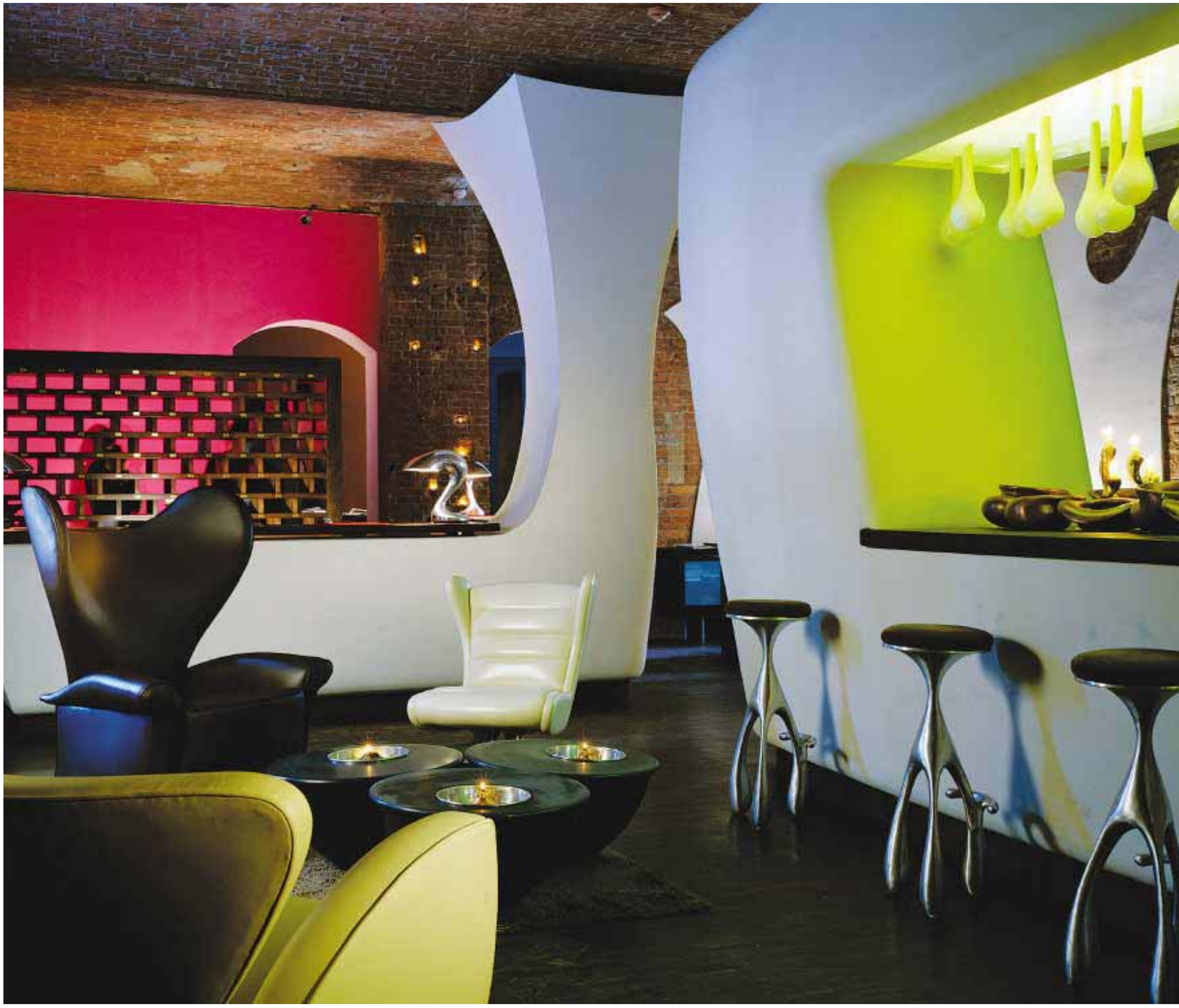
As he does on most projects, Mozer designed almost everything that visitors see or touch, creating his own little universe of fantastic interior elements. He began by scanning electron microscope photos of living organisms, which, when magnified several million times, would eventually become the inspiration for virtually all the bespoke Eastern-influenced decorative flourishes inside the property. These included Kevlar-reinforced resin stools, Thai-inspired brushed-aluminum sinks, filigree fixtures wrought from iron, bulbous handmade furnishings and sculptures, and even sinewy iron candleholders.

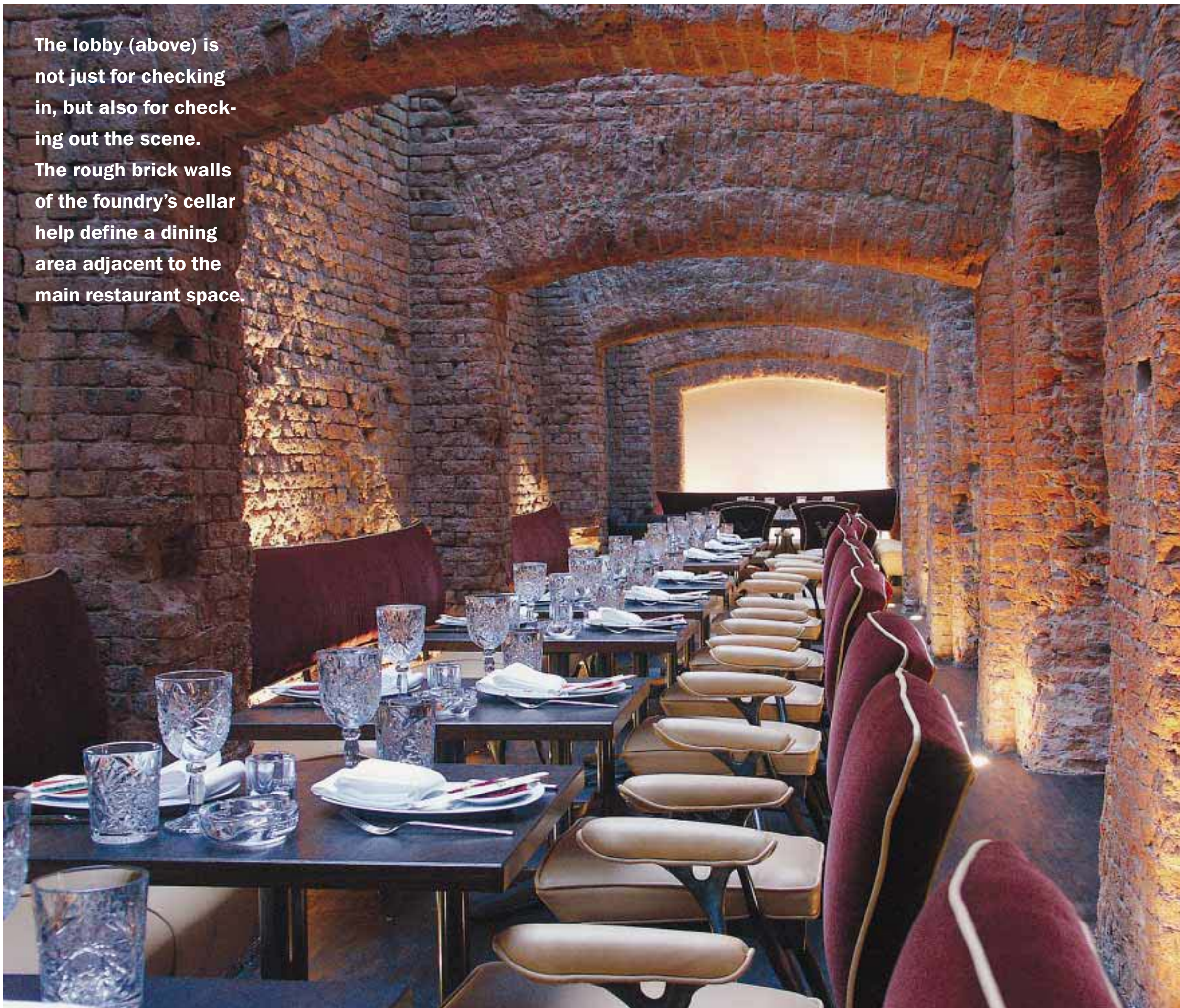
Rooms get the same idiosyncratic treatment. But Mozer went a step further, rethinking fundamental design elements altogether. So, in addition to open floor plans and middle-of-the-room bathroom counters, the traditional perpendicular headboards for the centerpiece beds have been remade like oversize wing-back chairs to "make lounging around more comfortable."

Commentary

Mozer's animated forms and quirky design aesthetic are unlike anything else found in Hamburg—either old or new. Working outside the boundaries set by the crisp geometries of European Modernists or the fluid forms of young blob-itects, he has created a visually and texturally rich enviornment that seems fresh to gastronomes, bar hoppers, and Europhile hotel guests alike. And the old brick envelope of the East Hotel adds a welcome patina of history to his exuberant architecture. ■

PHOTOGRAPHY: © MARTIN SHEENAN (BOTTOM)





The lobby (above) is not just for checking in, but also for checking out the scene. The rough brick walls of the foundry's cellar help define a dining area adjacent to the main restaurant space.

Mix

Las Vegas, Nevada

3

PATRICK JOUIN CREATES A PAIR OF SPACES INSPIRED BY THE NATURAL, NOT JUST THE ARTIFICIAL, SPECTACLE OF LAS VEGAS.

By Clifford A. Pearson

Interior designer: *Patrick Jouin—Patrick Jouin, principal; Sanjit Manku, director; Marie Deroudilhe, project architect; Claudia Del Bubba, senior interior designer; Aurélie Berthet, project team*
Architect: *Klai Juba Architects—Robert White, project architect*
Client: *Mandalay Development*
Engineers: *JBA Consulting Engineers (m/e/p); Lochsa Engineering (structural)*
Consultants: *L'Observatoire (lighting); Savi (sound); Philippe David (graphics); Paul Valet Consultant (kitchen)*
General contractor: *Mandalay Development*

Size: *16,000 square feet; 240 seats (restaurant); 300 seats (lounge)*
Completion date: *December 2004*

Sources
Banquettes, pods, tables: *Mueller Custom Cabinetry*
Cast-glass bar top: *Savoy Studios*
Glass chandelier: *Murano Due*
Restaurant chairs: *Custom by Patrick Jouin for Cassina USA*
Poured-rubber lounge flooring: *Connor Sports Floors*
Lounge tables: *Fairway of California*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

Perched 43 floors above the streets of Las Vegas, Mix offers a rare commodity in the land of a million slots—views: of the glittering Strip, the desert, and the mountains beyond. While casinos spend huge sums of money creating internal universes where the sun never sets (or rises), Paris-based designer Patrick Jouin relished the chance to connect Mix to the spectacular world beyond the reach of air-conditioning.

Program

Mix occupies the top floor of THEhotel, the boutique sister attached to the Mandalay Bay casino hotel. With a stylish clientele staying in the guest rooms below, and star chef Alain Ducasse in charge of the menu, Mix needed to be both edgy and sophisticated. Complicating matters further, the establishment is really two places—an upscale restaurant with 240 seats and a sprawling lounge with 300 seats. Although the two portions flow one into the other on the same level and share a 6,000-square-foot kitchen, each has its own bank of elevators and entry.

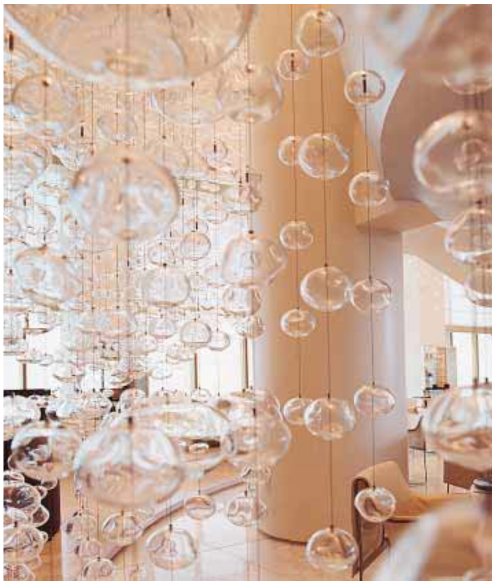
Solution

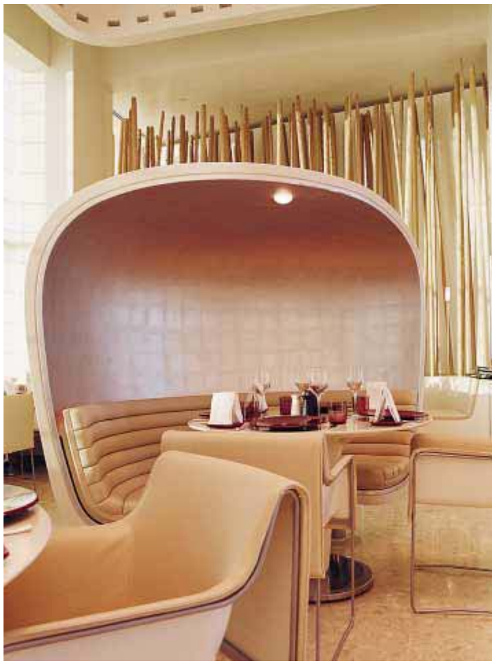
"The views from up there are spectacular, so I imagined Mix as a special place suspended between the desert and the sky," says Jouin, who has worked with Ducasse on other projects, including Spoon at Chlösterli in Gstaad, Switzerland [RECORD, July 2004, page 140] and Mix in New York City, which closed earlier this year. "Las Vegas is a big, crazy, fun kind of town, but everything is fake," explains the designer. "I didn't want to copy anything here. I wanted it to be an original."

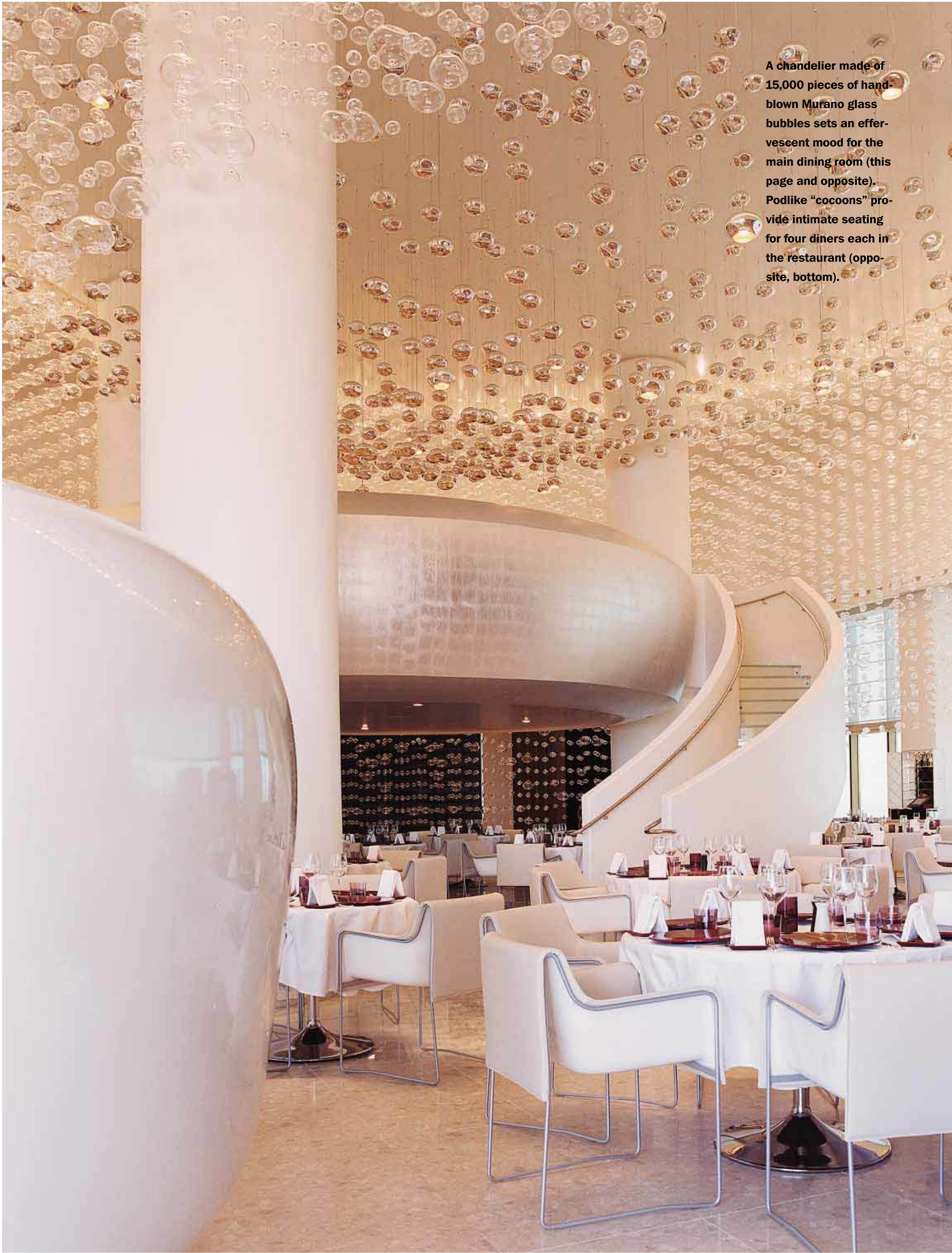
Jouin took advantage of the top-floor location by creating two expansive terraces—one for the lounge, the other for the restaurant—and wrapping the interior spaces with glass that descends most of the 35 feet from ceiling to floor.

He then gave each of the two major functional elements its own identity: one dark and mysterious, the other ethereal and elegant.

"I saw the lounge as a cave in the desert, shaped by wind and water," he explains. He used one material—a dark brown faux leather—to cover walls, ceilings, and furniture, establishing an intense, monochromatic setting within which he carved various zones for sitting, drinking, and milling around. Tucked to one side, off the entrance, he inserted a white fiberglass champagne bar and surrounded it with stools equipped with their own small mirrored tables perfect for a flute of bubbly and some caviar. A long, snaking banquette runs the length of the lounge, separating it into a number of sitting areas. Near the center of the lounge, a fiery red form erupts, providing a dramatic counterpoint to the rest of the space. Made of fiberglass wrapped around metal framing, this volcanic element

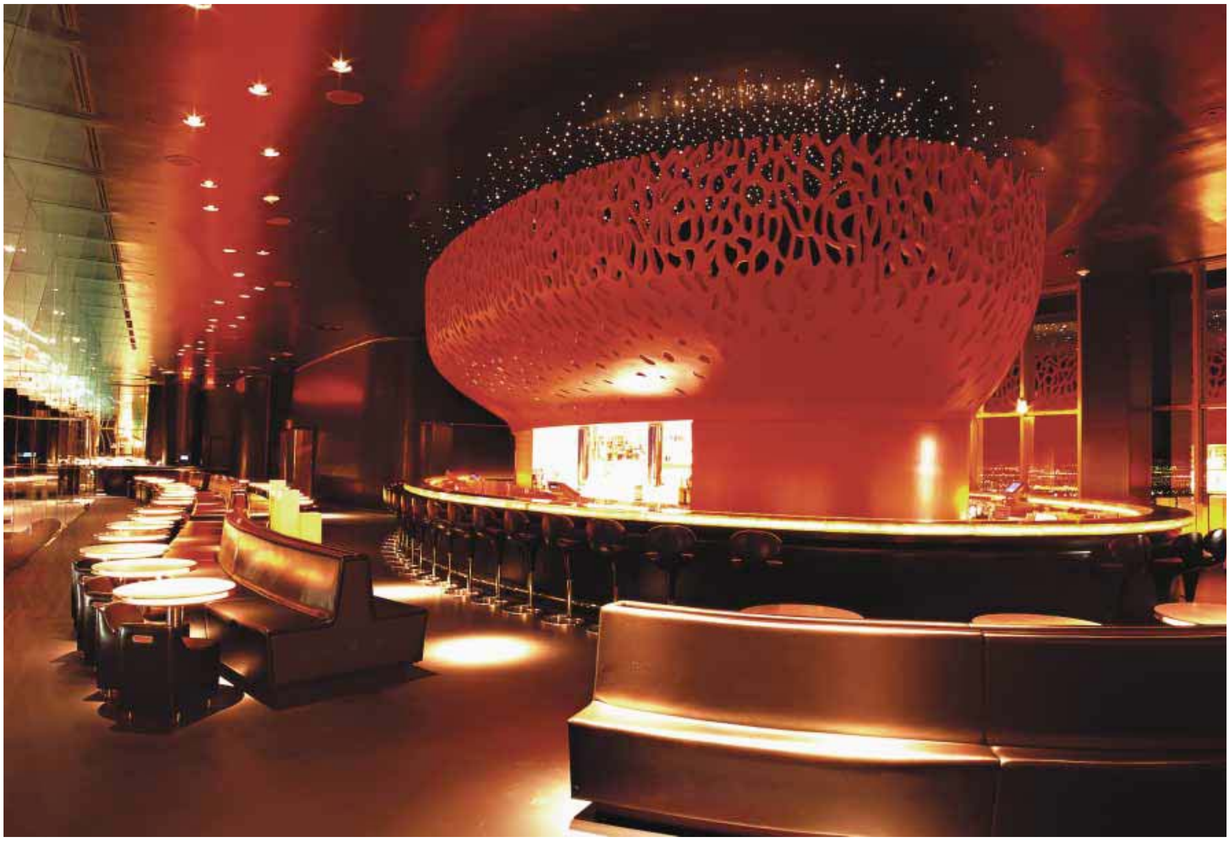




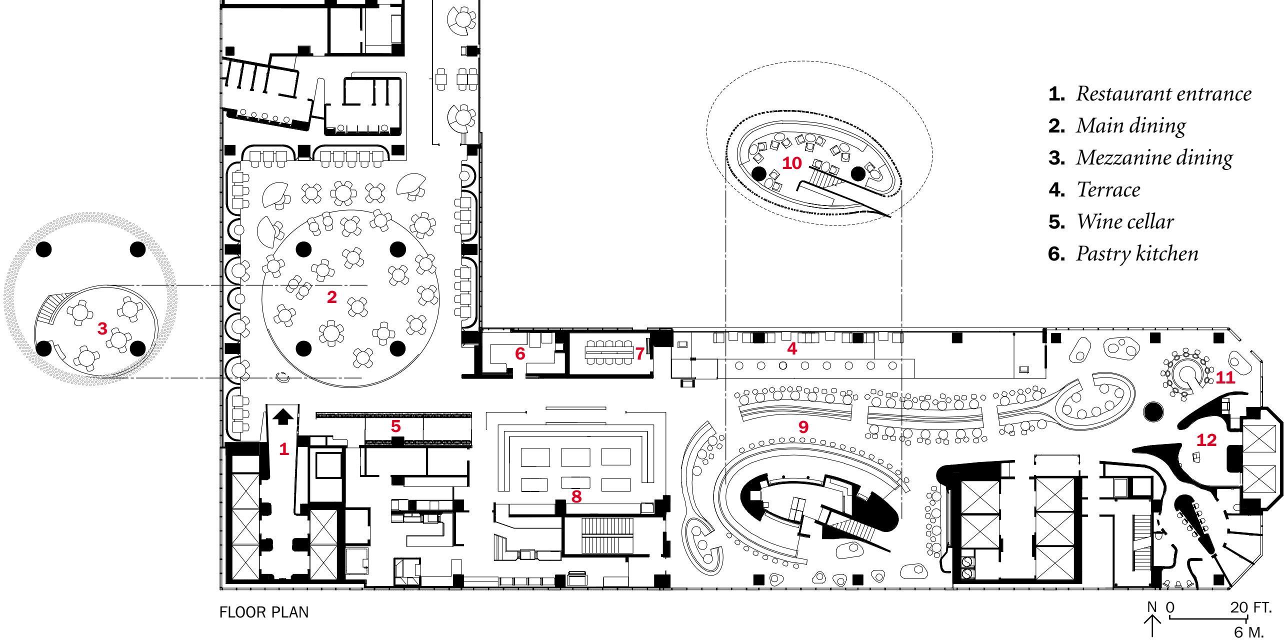


A chandelier made of 15,000 pieces of hand-blown Murano glass bubbles sets an effervescent mood for the main dining room (this page and opposite). Podlike "cocoons" provide intimate seating for four diners each in the restaurant (opposite, bottom).

PHOTOGRAPHY: © THOMAS DUVAL, EXCEPT AS NOTED



Jouin wrapped most of the surfaces in the lounge (including walls, ceiling, and furniture) with faux leather to create a desert-cavelike feeling, and then inserted a few bold accents, such as the volcanic red main bar (left) and the white champagne bar (in background of photo below).



1. *Restaurant entrance*
2. *Main dining*
3. *Mezzanine dining*
4. *Terrace*
5. *Wine cellar*
6. *Pastry kitchen*
7. *Chef's table*
8. *Kitchen*
9. *Main bar*
10. *Mezzanine bar*
11. *Champagne bar*
12. *Bar entrance*

PHOTOGRAPHY: © ERIC LAIGNEL (TOP)

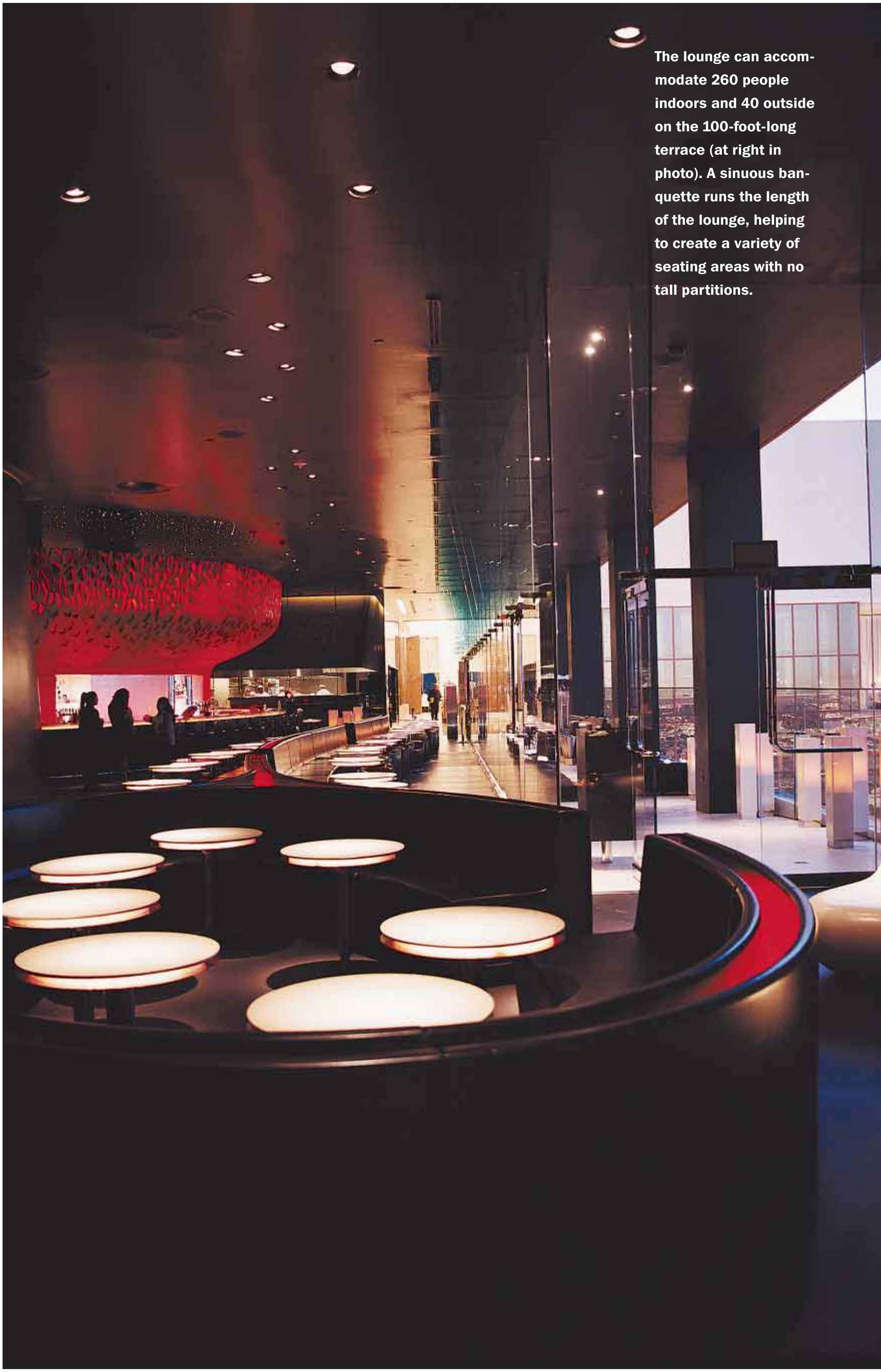
serves as the main bar and was dropped in place by helicopter before the restaurant's roof was erected. Jouin designed a glowing serving counter for the bar, commissioning Savoy Studios in Oregon to cast 4-inch-thick blocks of glass with suspended air bubbles and then assembling the hand-polished blocks into a sensual curve. A V.I.P. area sits atop the volcano and is partially lit by fiber-optic spots set in the ceiling to evoke stars in the desert's night sky.

Jouin switched gears and hues in Mix's restaurant, a seductive study in beige, ecru, and white. "I like to play opposites off each other—dark and light, rough and smooth," he explains. He set the large, open kitchen between the drinking and the dining areas, using smoky glass partitions to enclose a chef's table and a pastry kitchen.

While customers in the lounge can walk through the kitchen area to get to the restaurant, most diners arrive from elevators at the opposite end of the space. When they exit on the 43rd floor, they walk through a dark, tunnel-like corridor from which they can glimpse a tall, softly glowing space at the end. Just as he did with the volcano bar in the lounge, Jouin created a two-story showpiece for the restaurant: a remarkable chandelier made of 15,000 hand-blown Murano glass bubbles, suspended from the ceiling and almost reaching the floor. A silver-leaf-finished enclosure sits within the 50-foot-wide diameter of the chandelier and features a mezzanine where the hanging glass bubbles are coated with a reflective surface. "When you're sitting inside the chandelier, you're in the clouds," says Jouin.

Commentary

While Jouin sees Mix's lounge and restaurant as a dialectic, the two don't seem to be talking to one another. Each delivers a powerful architectural punch, but the contrast between them is too great to offer a satisfying resolution. Think of them, though, as two exciting projects that just happen to be connected, and you get a pair of great experiences for the price of one. ■



The lounge can accommodate 260 people indoors and 40 outside on the 100-foot-long terrace (at right in photo). A sinuous banquette runs the length of the lounge, helping to create a variety of seating areas with no tall partitions.

W Hotel

Seoul, Korea

4

A TEAM OF STUDIO GAIA, TONY CHI, AND RAD EXTENDS THE W HOTEL BRAND TO ASIA, TAKING DIFFERENT APPROACHES TO COOL DESIGN.

By Raul Barreneche

Architect of public spaces: *Studio Gaia—Ilan Waisbrod, principal; Kevin Lien, Yukiko Kiode, Vennie Lau, Maki Tsuchiya, Anurag Nema, design team*
Interior designer of restaurants: *Tony Chi and Associates—Tony Chi, principal; Johnny Marsh, William Paley, Nelson Bicol, David Singer, Jerry Ryu, project team*
Design architect of hotel: *RAD—Aaron Tan, principal*
Architect of record: *Heerim*
General contractor: *SK Construction*

Size: *253 guest rooms, 100 seats (Namu); 160 seats (Kitchen)*
Completion date: *August 2004*

Sources
Reception area rug: *Eurotex*
Resin wall panels: *Kinon*
Half-round lounge chairs: *Felicerossi*
Bar benches and bar stools: *Custom by Casa Zeta*
Leather banquettes: *Moore & Giles*
Hanging pendant lights: *Custom by Neidhart*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

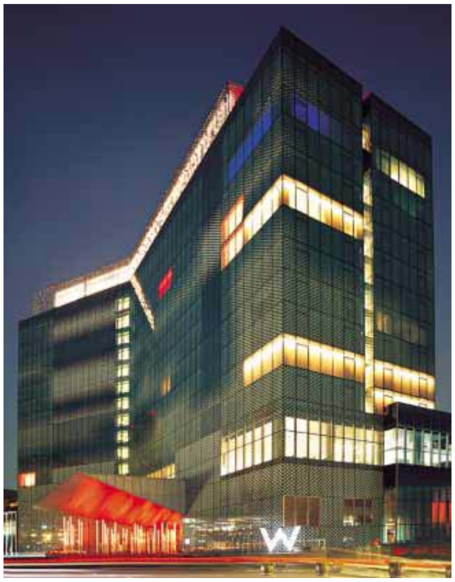
For its first property in Asia, Starwood Hotels and Resorts' trendy, design-conscious W chain chose the Walkerhill complex outside downtown Seoul, an urban resort overlooking the Han River from the base of Mount Acha. The forested hillside site, which was named after U.N. General Walton H. Walker, opened as one of South Korea's first international-caliber resorts in 1963. Today, the complex includes a duty-free shopping mall with international luxury brands, a Sheraton hotel, and the W, which opened in August 2004. The property is the chain's third location outside the U.S., after Sydney and Mexico City.

Program

The 14-story hotel contains some predictable functions—253 guest rooms (30 of them suites); two restaurants; a gym; a 50,000-square-foot spa with a café; and a business center—and less standard fare. Besides the requisite reception desk and concierge station, the 5,000-square-foot, wireless Internet–ready lobby (branded by Starwood as the Living Room) includes a 10,000-square-foot bar, a DJ booth, and loungy seating areas.

Solution

W commissioned three firms to design the hotel and its interiors. Aaron Tan of the Hong Kong firm RAD (a spin-off of the Asian branch of Rem Koolhaas's OMA) designed the blue fritted-glass architectural shell, as well as the spa. Tony Chi and Associates of New York designed the hotel's two high-end restaurants, Namu and Kitchen. And Studio Gaia, the New York design firm responsible for some of Manhattan's trendiest restaurants and clubs in the 1990s (such as Bond Street, Republic, and Cafeteria) designed the lobby, guest rooms, and hotel store.



Ilan Waisbrod, president of Studio Gaia (named after his 17-year-old daughter), says one of his biggest challenges was to translate the intimate feeling of a boutique hotel to a space with the towering scale of a grand hotel lobby. Waisbrod broke the 5,000-square-foot double-height room into a series of smaller zones without walls, creating various sitting areas with modish, 1970s-inspired egg-shaped chairs and low-slung sofas built into the stairs.

Waisbrod's firm designed three types of guest rooms, distinguished by decor rather than size: standard rooms; media rooms with round beds and a giant pole-mounted plasma video screen; and spa rooms, designed as contemporary versions of traditional Asian meditation spaces.

For their part, Tony Chi and Associates created two restaurants that put a sophisticated polish on rustic natural materials. Chi, the designer responsible for such stylish Asian eateries as Asiate in New York's new Mandarin Oriental hotel and the Hong Kong outpost of Spoon by Alain Ducasse, treated the lofty Kitchen restaurant as a "modern interpretation of a hillside barn." Namu, which serves food from around Asia—Japanese sashimi and sake, Korean barbecue—also finesses warm traditional materials with more modern styling.

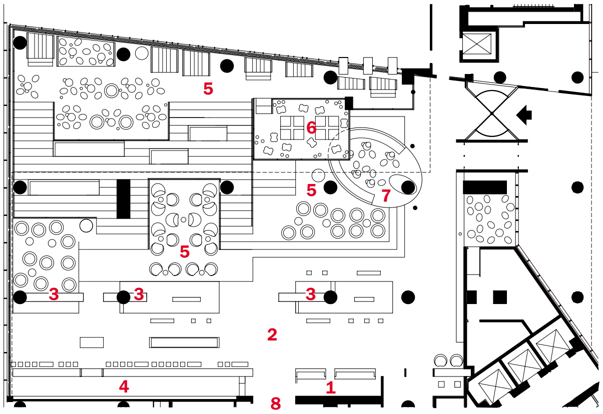
Commentary

By hiring three different design firms with distinct visual sensibilities, W got

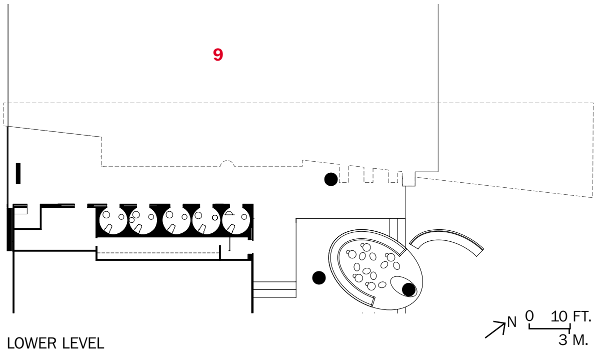
Contributing editor Raul Barreneche's next book will be Pacific Modern.

PHOTOGRAPHY: © SEUNG HOON YUM, EXCEPT AS NOTED; COURTESY W HOTELS (THIS PAGE)

The Hong Kong firm RAD designed the building's envelope (opposite), while New York–based Studio Gaia created the public spaces, such as the multitiered lobby, which the hotel calls the "Living Room" (right and below).



MAIN LEVEL



LOWER LEVEL

In the lobby, the 60-foot-long Woo Bar (above) features digital art on the wall and cool-toned lighting all around. In the lounge areas, the firm tried to create more casual, intimate settings (right).

1. *Registration*
2. *Lobby lounge*
3. *Fireplace*
4. *Bar*
5. *Raised lounge*
6. *Garden lounge*
7. *Oval lounge*
8. *To Namu*
9. *Kitchen*

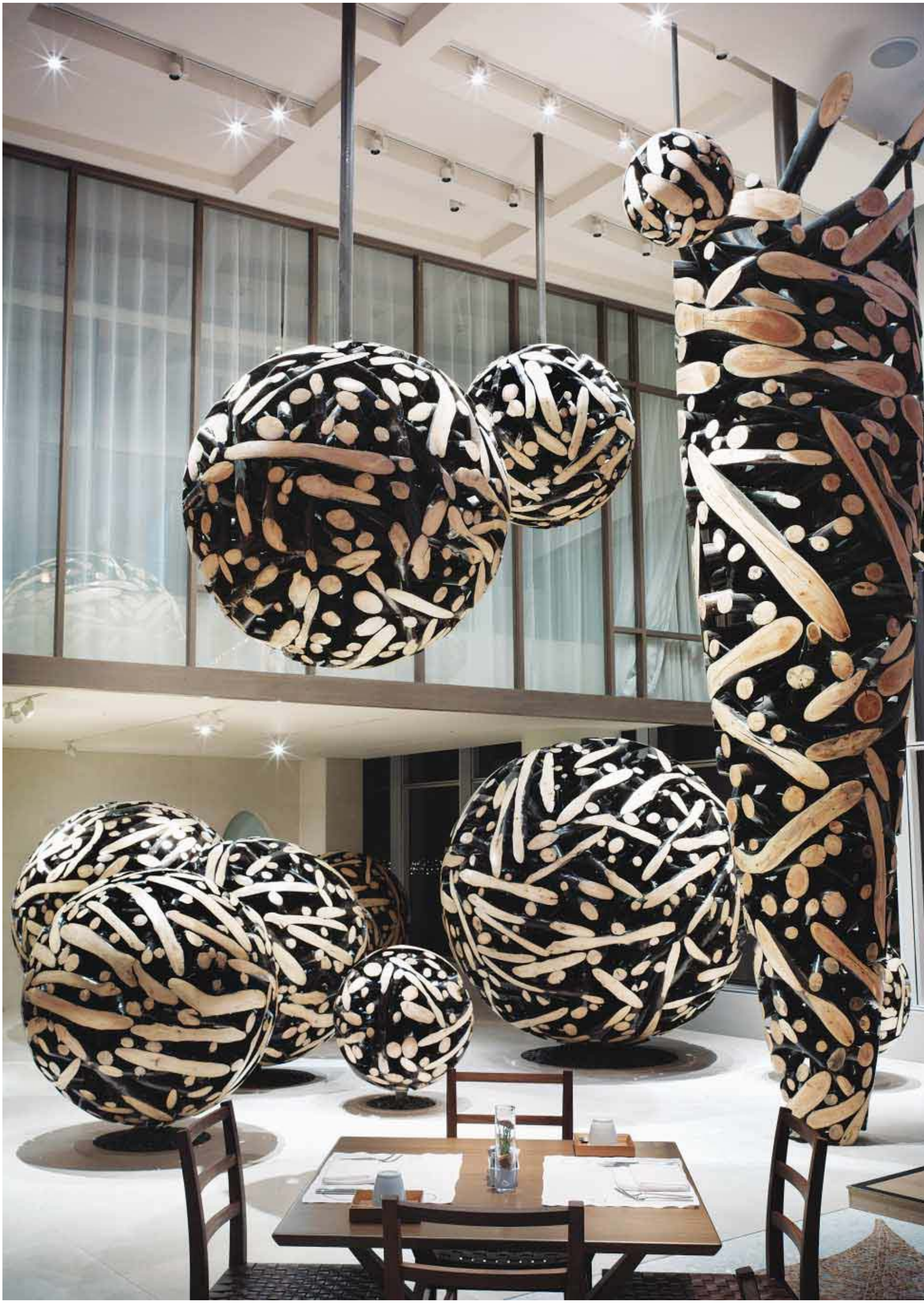
The 5,000-square-foot Living Room provides wireless Internet access and a patchwork of lounges where distinctive furnishings and steps, rather than walls or partitions, define the spaces (below and right).

a discordant whole. RAD's pixilated blue-and-white glass exterior, suggesting cloud patterns rising above a stone-clad base dug into the hillside, seems an appropriately playful wrapper for Studio Gaia's Minimalist public spaces and guest rooms, populated by monochromatic egg-shaped ottomans, curvaceous armchairs, and other custom-designed furnishings. Tony Chi's elegant if overwrought restaurants look like they would be more appropriate in a more serious—and more "grown-up"—hotel. But in a trendy, Minimalist interior world such as this, those grown-up rooms feel welcome, nonetheless.

In the lobby, Waisbrod wanted to mix up activities and blur distinctions between different functions. To that end, he designed a single long bar that serves as concierge desk, reception counter, cocktail bar, and DJ booth. "You're not sure if the guy behind the counter is the barman or the concierge," says Waisbrod. That may be a provocative proposition for a student design project, but in the real world, weary, jet-lagged travelers would rather not have to guess who will book their car service and who will pour their martini. Add a DJ and the 10,000-square-foot Woo Bar to the lobby, as W did, and you might start to wonder who's the more important customer, overnight guests or locals who stop by for a few drinks?

Indeed, it seems like the top priority was to make the entire hotel feel more like a trendy nightclub than a restful retreat. Waisbrod designed the experience of walking into one of the standard rooms to be like unwrapping a gift: white curtains flanking the entry conceal everything except a sculptural chair at the end of the room. For anyone who has ever navigated the unfamiliar territory of a hotel room, not being able to see anything—the bed, the bathroom door, the desk where you left important papers—sounds completely and unnecessarily disorienting. Design-conscious hotels should remember that travelers care as much, if not more, about mundane things such as good service, easy navigation, and getting a good night's sleep. ■

Tony Chi designed two restaurants in the hotel. At Namu (opposite two), he used wood on many surfaces to relate the design to the trees on nearby Mt. Acha, and created private dining areas in both Western and Asian styles. Visitors to Kitchen (right) enter through a "maze" dominated by sculptural pieces created by the Korean artist Lee Jae Hyo.



PHOTOGRAPHY: © ERIC LAIGNEL (THIS PAGE AND OPPOSITE)

Innside Premium Hotel
Munich, Germany

5

JAHN LYKOURIA HELPS REINVENT THE BUSINESS HOTEL AS A PLACE WITH STYLE AS WELL AS EFFICIENT SERVICE.

By Catherine Slessor

Interior designer: *Jahn Lykouria Design—Yorgo Lykouria, Armando Elias, Wenke Reitz, design team*
Client: *Innside Hotels GmbH*
Architect: *Murphy/Jahn*
Engineers: *Werner Sobek Engineers (structural); ENCO (mechanical)*
Consultants: *Peter Walker (landscape); L-Plan Lichtplanung (lighting); Horstmann + Berger (acoustical); Transsolar Energietechnik (energy); Fassadenberatung Planungsbuero fuer Fassadentechnik (facade)*
General contractor: *Strabag AG*

Size: *160 guest rooms (hotel); 102 seats (restaurant); 46 (bar)*
Completion date: *January 2005*

Sources
Curtain wall: *Schmidlin Facade Technology*
Reception chair (Buddha): *Designed by Jahn Lykouria and manufactured by Moroso*
Dining chair (Naiad2): *Designed by Jahn Lykouria and manufactured by Classicon*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

Travelers annoyed by the whimsical fripperies of boutique hotels or jaded by the bland anonymity of establishments aimed at a corporate clientele will relish the new Innside hotel in Munich. Nestling at the base of Munich's two tallest towers, the Innside has the formal and material finesse associated with architect Helmut Jahn, but projects an edgier, hipper attitude, thanks to Jahn's collaboration with the young, London-based designer Yorgo Lykouria. Here, at last, is a proper grown-up hotel that mixes the best aspects of boutique and business in a subtly blended cocktail.

Program

Since the mid-1990s, the German chain Innside has acquired a reputation for comfortable, reliable executive hotels, with outlets in Bremen, Berlin, Dusseldorf, and Frankfurt, and plans to expand into Luxembourg. The company's second Munich hotel in the evolving northern district of Parkstadt Schwabing forms part of a major commercial development designed by Murphy/Jahn. Strategically set within a half-hour drive to the airport, the complex combines the two office towers with an L-shaped hotel block. The hotel caters to the needs of the business traveler, with 202 guest rooms augmented by a restaurant, bar, fitness club, and a series of meeting/conference rooms. The interior design provided a chance for Jahn to work on a more intimate scale with Lykouria. Since the mid-'90s, the pair has worked together on a series of furniture and product designs, as well as the interiors of the Sony Centre in Berlin and the Deutsche Post Tower in Bonn.

Solution

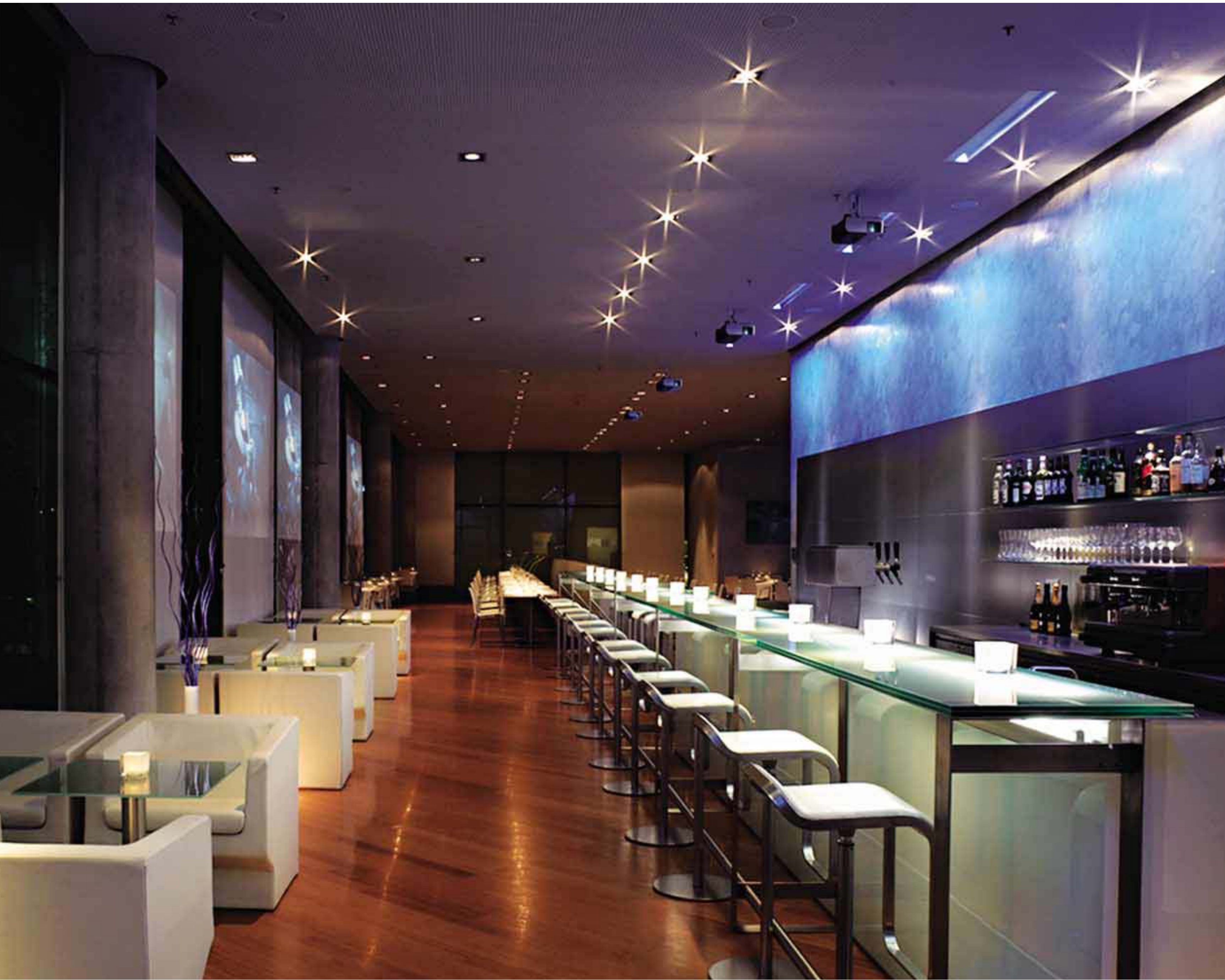
From a set of fairly conventional requirements and a far-from-generous budget of 1.2 million euros ($1.4 million), Jahn Lykouria has conjured a set of contemporary, upscale interiors that treat the business traveler as a kind of savvy modern nomad, wired to the world but still craving privacy, intimacy, and luxury. The hotel and adjoining towers are situated on Mies van der Rohe Strasse, a nice bit of poetic justice, given Murphy/Jahn's penchant for Teutonic sleekness and precision. The Innside's crisply glazed facade would not disappoint the master, nor would the elegant and economical use of materials, animated by both natural and artificial light. Public spaces have polished bamboo floors set off by walls of Venetian plaster and plain concrete, the latter almost Japanese in their asceticism and quality of construction. Smart, Modern club chairs, custom designed by Jahn Lykouria for Italian manufacturer Moroso, populate the foyer and restaurant. A 40-foot-long bar made of translucent

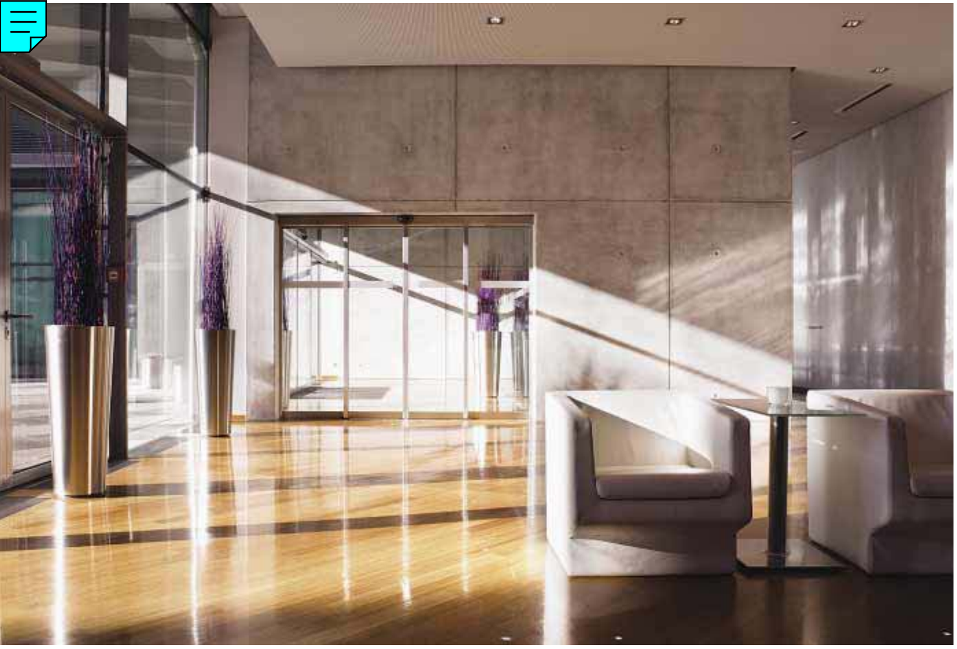
Catherine Slessor is an architect and the managing editor of The Architectural Review *in London.*

PHOTOGRAPHY: © TOM VACK

Part of a mixed-use complex designed by Murphy/Jahn, the hotel combines a neutral palette of modern materials (far right) with a few flashes of color, such as on headboards in guest rooms (right). The sleek, elegant bar flows directly into the restaurant (below).

INNSIDE
PREMIUM HOTELS
10





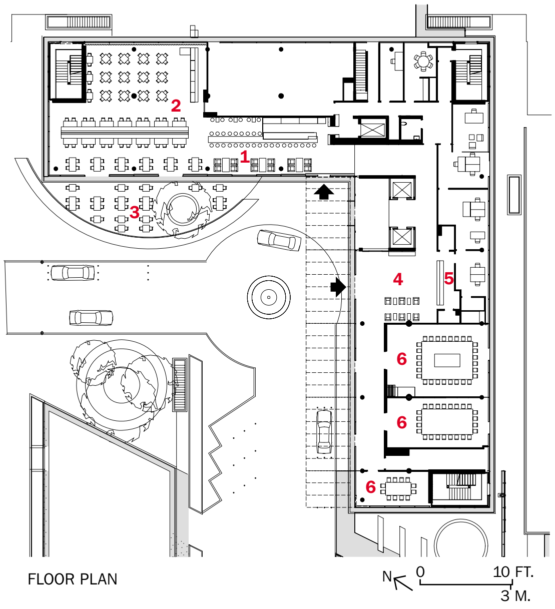
Jahn Lykouria tried to give the lobby (left) and all the public spaces in the hotel a slightly austere, almost monastic character. Artwork, lighting, color, and furnishings add touches of sensuality to the reception area (below). The Buddha chairs in the lobby and reception area were designed by Jahn Lykouria for this project.

glass panels held in polished stainless-steel frames seductively catches the light and plays off the solidity and opacity of the concrete walls.

A bank of clear glass elevators shuttle weary business nomads up to their tastefully minimal bedrooms. Here, too, a spirit of elegant economy prevails, with walls and floors of muted grays and en suite bathrooms fluidly enclosed in walls of translucent glass. Floor-to-ceiling glazing enhances the pervading sense of lightness and seamlessness. Within a consciously minimal palette, color is permitted limited tactical intrusions, notably on the oversize headboards. These are boldly color coded according to floor and emblazoned with a morphed and blurred image from Guido Reni's *The Abduction of Dejanira*, from his *Labours of Hercules* fresco cycle of 1617–21. In a state of fashionable undress, Dejanira hovers like a nebulous angel over the heads of slumbering guests. It is a slightly surreal, boutique touch that recalls Philippe Starck's Vermeer headboards for New York's Paramount Hotel, but against the backdrop of the coolly austere bedrooms, somehow it works.

Commentary

In an increasingly fashion-fickle and cost-conscious environment, hotels must strive hard to attract and maintain customers. Innside's edge is its apparently effortless elegance, achieved by a rigorous clarity of form and detailing, allied to the visual and tactile pleasure of well-chosen materials. From ironmongery to wall finishes, everything has a sense of purpose and refinement. The net effect has also been to refine and sharpen Innside's corporate image, with the Munich hotel now rebranded as Innside Premium, rather than the more mundane-sounding Innside Residence that the company has used before. With skill and flair, Jahn Lykouria reinvents the business hotel as a haven of sensuous austerity, where everything works efficiently and nothing jangles the nerves, so that both a fashion- and cost-conscious clientele will want to check in again and again. ■



1. *Bar*
2. *Dining*
3. *Terrace dining*
4. *Hotel lobby*
5. *Registration*
6. *Conference*

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The Hopes and Fears of Design-Build

THIS METHOD OF PROJECT DELIVERY TEMPTS SOME ARCHITECTS WITH THE ROLE OF MASTER BUILDER WHILE THREATENING TO PUT OTHERS ON PAR WITH THE TRADES

By Nancy B. Solomon, AIA

Whether architects like it or not, design-build is on the rise. According to the Design-Build Institute of America (DBIA), an association founded in 1993 to promote single-source project delivery within the design and construction community, about 40 percent of all nonresidential construction projects in both the public and private sector now use this approach, in contrast to fewer than 10 percent two decades ago. And, on average, the 98 companies responding to ZweigWhite Information Services for its *2005 Design/Build Survey of Design & Construction Firms* indicate that, over the next five years, a larger percentage of their gross annual revenue will come from design-build projects. "Design-build is taking off," says Dorwin Thomas, AIA, the current chair of AIA's Design-Build Knowledge Community. He predicts that it will be the leading method of project delivery in North America by 2010.

The Buchanan Yonushewski Group of Denver provided design, construction, and development services to expand and convert a local historic warehouse into the WaterTower Lofts.

PHOTOGRAPHY: © FRED FUHRMEISTER

Admittedly, many of these projects are not the kind that architects focus on. According to the same ZweigWhite survey, the responding firms were most likely to employ design-build in the market that includes industrial plants, refineries, and warehouses (48 percent of this work was reported to be done via design-build). But this is followed closely by commercial (46 percent), parking garages (44 percent), recreation (39 percent), and medical facilities (38 percent). And the list goes on to include hotels/multifamily residential (34 percent); schools, libraries, and museums (26 percent); and other public buildings (34 percent). "I used to think design-build was better for cookie-cutter types of projects, but you are now seeing more complex projects being done by design-build," observes Harold Adams, FAIA, chairman emeritus of RTKL Associates and the current chairman of DBIA—the first architect to assume that post.

One contract instead of two

Simply put, design-build describes a method of project delivery in which the client holds only one contract with the entity that will design and build the structure in question. This is in contrast to the so-called traditional project delivery method known as "design-bid-build," in which the client holds two contracts: the first with the design firm that conceptualizes the project, generates the construction documents, assists the client in procuring a builder, and advocates on behalf of the client to ensure that the project is built according to the drawings and specifications; the second is with the builder. Architects who are proponents of design-build often liken it to the process that was common before the 18th century, when edifices were typically shaped by a "master builder" rather than by a splintered group of architects, engineers, and contractors. Other supporters point out that some forms of design-build have long been popular in other countries, such as Japan and France.

Opportunities for architects in design-build, however, were in the

Contributing editor Nancy B. Solomon, AIA, writes about computer technology, building science, and topics of interest to the architectural profession.

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/AIA Continuing Education article. To receive credit, turn to page 174 and follow the instructions. Other opportunities to receive Continuing Education credits in this issue include the following sponsored sections: "Daylight in the Office Space," sponsored by Lutron, page 183, and "The Green Market Reaches Critical Mass," multi-sponsored, page 190.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Explain the benefits of design-build projects for architects and clients.*
2. *Describe the differences between design-build and traditional project management methods.*
3. *Discuss reasons for the increased use of design-build.*

For this story and more continuing education, as well as links to sources, white papers, and products, go to ***www.archrecord.com***.

University of Kansas at Lawrence

Recognizing the need for students to better understand the realities of construction, a few schools have nurtured design-build programs. The School of Architecture and Urban Design at the University of Kansas has offered a senior graduate design-build studio since 1995. In the past two years, the studio has generated two affordable houses constructed from prefabricated modules: the Modular 1 House (opposite, left two and drawings, right) and the Modular 2 House (this page), both in Kansas City.

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United States during the first half of the 20th century. The AIA's first Code of Ethics, adopted in 1909, forbade its members from participating in design-build projects due to a perceived conflict of interest in protecting the owner while at the same time profiting from the construction labor and materials. In addition, federal and state procurement laws were based solely on the design-bid-build method and therefore did not permit the use of a combined design-build contract.

Due to various and complex forces, the fate of design-build began to shift in the latter half of the century. AIA adopted a new Code of Ethics in 1986 that no longer forbade design-build; the federal government has gradually come to embrace the process; and—according to G. William Quatman, FAIA, a licensed architect and attorney with the law firm of Shughart Thomson & Kilroy in Kansas City, Missouri—currently all but six states have laws that permit some level of design-build for public projects.

Design-build proponents say these changes have occurred largely because, over the years, many more clients and industry members came to feel that the design-bid-build's enforced separation fostered conflicts among the various parties holding separate contracts with the client, thus fueling litigation and increasing overall costs. "Owners are fed up with design-bid-build," says Thomas. "They are demanding design-build because it saves time and money and reduces conflict."

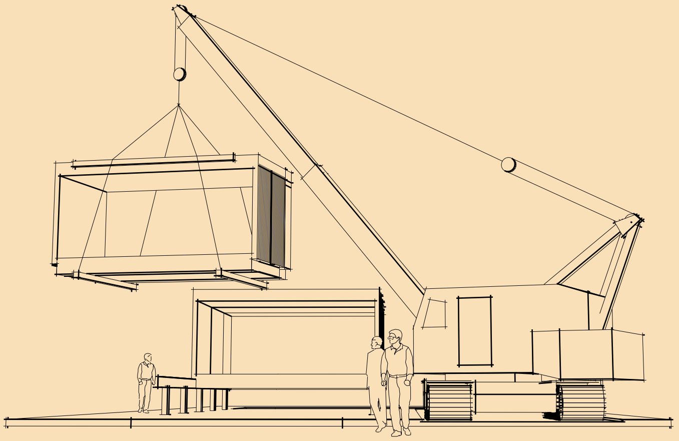
The quality level offered by this method of delivery, however, remains a nagging concern to many. According to Adams, the federal government has embraced design-build because it believes that its detailed performance specs will ensure that its requirements will be met. But some clients still fear they will not get what they need if all the authority is placed within the hands of one design-build team. Adams contends, however, that all clients can get better quality design and products by having a contractor who knows construction techniques and installation costs on board from the start.

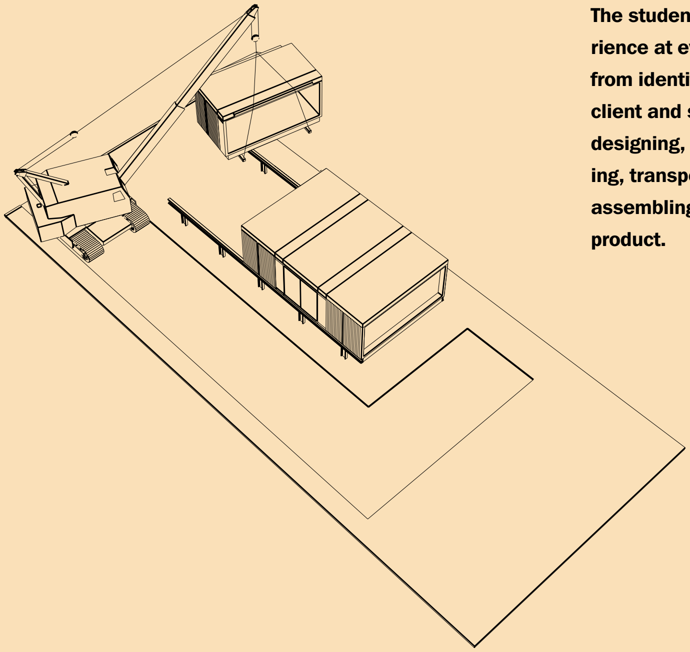
The many faces of design-build

Despite the ethical and legal changes over the past 20-some years, and the growing preference for a single-source delivery method on the part of many owners, only 20 percent of AIA-member firms responding to the institute's 2003 firm survey indicated that they were offering design-build services of some kind at that time. Nonetheless, interest does seem to be growing among practitioners: With more than 8,000 members, the AIA's Design-Build Knowledge Community is the fourth largest of AIA's 25 interest groups. During his tenure as DBIA chair, Adams is encouraging other architects to get involved and learn more about design-build.

One of the first things architects need to understand is that there

PHOTOGRAPHY: COURTESY UNIVERSITY OF KANSAS AT LAWRENCE (THIS PAGE AND OPPOSITE)





The students gain experience at every stage, from identifying a real client and site through designing, manufacturing, transporting, and assembling the final product.

are many permutations of design-build. The service, for example, can be provided by a project-specific joint venture between an architecture firm and a contracting company, a single company that has both designers and builders on staff, or an individual developer, builder, or architect who subcontracts the other necessary expertise and skills for a given project. Thomas reports that even businesses with no historical connection to construction—such as accounting firms—have gotten into the act, serving as brokers by hiring all the other players.

According to ZweigWhite's 2005 survey, 55 percent of the firms' design-build projects were headed by a contractor; 26 percent were led by an integrated firm, which has both design and construction expertise in-house; 11 percent were led by designers; 5 percent by joint venture; and 4 percent by developers. It should be noted that the staff of the design firms in this survey are dominated by engineers, so currently very few design-build projects are actually spearheaded by architects.

The roles and influence of the architect can vary greatly from team to team, even among those that are structured similarly in terms of who holds the contract with the owner. According to Adams, "DBIA is not pushing one version. We'd like to get the designer into design-build. The architect does not have to be the lead, but must be at the table all the time."

Architect Steve Coxhead, senior associate at David Owen Tryba Architects (DOTA) in Denver, agrees: "As long as the contractor is sensitive to the design philosophy and intent, the quality can be just as good in a contractor-led project. The quality really has more to do with the relationship between contractor and designer."

DOTA's first design-build venture began in 2000, when the architecture firm approached Hensel Phelps Construction to collaborate on a Request for Proposal disseminated by the City of Denver for a municipal building near the central business district. The RFP specified a single-point contract for architectural, engineering, and construction services. Their team was awarded the job. Hensel Phelps held the contract with the city. DOTA, a consultant to the contractor, served as the lead design architect and architect of record. The Denver office of RNL Design was brought on board as associate architect.

Coxhead admits the architects were initially fearful that the large contracting company would bully the smaller architecture firm through the process. Instead, he says, "We were pleased to learn that they were willing to work with us to understand our design philosophy and intent." It was very much a team approach: "We worked very closely with Hensel Phelps to stick to the budget, while they were very design-sensitive," he notes.

Coxhead highlights two strategies that helped the disparate disciplines work well together. It's critical, he says, "to establish the relationship before anyone starts worrying about the final design or the construction sequence, and then to nurture it through the process." After their team was selected, the various players participated in team-building retreats to create an atmosphere of communication and cooperation. And to maintain this spirit of teamwork, architect, engineer, and contractor worked together in the same office adjacent to the site. Says Coxhead, "It made it easy to walk down the hallway to talk about the constructability and costs of a design idea."

Given the short amount of time they had to work within, Coxhead can't imagine accomplishing this particular project any other way: "We were awarded the project in January 2000; had a guaranteed-maximum-price set by May 2000; and started construction in July 2000." The Wellington E. Webb Municipal Office Building was finished in August 2002, one month ahead of schedule and $1 million under budget.

Well-known firms

These days, many nationally recognized architecture firms have some design-build projects in their portfolio. HOK, for example, currently has a contract with The Opus Group—a Minneapolis-based real estate development company with in-house expertise in architecture, engineering, and construction management—to provide design services for the Social Security Administration Southeast Payment Processing Center in Birmingham, Alabama. The 587,000-square-foot, eight-story office building is expected to be completed at the end of 2007.

The most successful design-build projects that William Hellmuth, AIA, president of HOK, has been associated with are those that are selected through a competition in which the submissions are judged on value, not just the lowest price. "Design-build can work very well where there is a documented desire for design quality, and the judging of the buildings is based on design quality within a given financial framework," reports Hellmuth. "The ability to bounce things back and forth within the cost framework—to have real-time feedback—is enormously helpful. The contractor may respond, for example, by saying, 'It will be all right if you do this, but if you just change this one thing, you can still get what you want and it will be easier to construct, so there will be extra money left over for a great lobby.' "

Like Coxhead, Hellmuth believes that it is the nature of the relationship between team members and the value placed on design that is most critical in affecting the quality of the final outcome in a design-build competition, no matter who is ultimately in charge. "If architecture is valued, the architect leads the effort, although the contractor may have the fiduciary responsibility," he says.

Architect-led teams

Nonetheless, there are those in the industry who would like to see more architects take full charge of the process. Observes lawyer/architect Quatman of Shughart Thomson & Kilroy, "Builders jumped up early to take the lead. Architects are signing on to be subcontractors to the 50 percent that are contractor-led." In this scenario, he fears that many of those architects are placed on par with the plumbers and electricians and have no direct contact with the owner. He firmly believes, however, that the current expansion in design-build affords the architectural profession a pivotal opportunity to take much greater responsibility in the design and construction fields—and reap the many potential benefits.

One practitioner who long ago took the helm is Brad Buchanan, FAIA, a founder and principal of the Buchanan Yonushewski Group (BYG) in Denver. After earning a degree in architecture, Buchanan worked for traditional architecture firms in Denver for about five years before setting out on his own. One of his first commissions was a small-town fire-

REVENUE GROWTH PROJECTIONS FOR DESIGN/BUILD

		Integrated Design/Build	Design Services/ Consulting	Construction
What percentage of your firm's gross annual revenue do you expect will be derived from design/build projects in 3 years?	Lower Quartile	50%	6%	30%
	Median	70%	15%	40%
	Mean	65%	20%	44%
	Upper Quartile	90%	25%	55%
What percentage of your firm's gross annual revenue do you expect will be derived from design/build projects in 5 years?	Lower Quartile	50%	10%	35%
	Median	75%	20%	50%
	Mean	69%	24%	49%
	Upper Quartile	90%	25%	60%
What percentage of your firm's gross annual revenue do you expect will be derived from design/build projects in 10 years?	Lower Quartile	65%	16%	35%
	Median	80%	25%	50%
	Mean	73%	29%	52%
	Upper Quartile	90%	50%	60%

MARKETS FOR DESIGN/BUILD

Category	All Work	Design/Build Work*
Which markets do firms serve, and in which one do firms use design/build as the method of project delivery? (means)		
Commercial	23%	46%
Industrial plants, refineries, and warehouses	14%	48%
Medical facilities	13%	38%
Schools, libraries, and museums	10%	26%
Environmental	8%	27%
Hotels/multifamily residential	7%	34%
Other public buildings	4%	34%
Roads, bridges, mass transit, and rail	4%	20%
Parking garages	3%	44%
Sports/recreation	3%	39%
Airports	2%	25%
Power/communications	2%	27%
Heavy marine construction	0%	**
Other	5%	47%

*Percentage of work in each market performed using design/build
**Based on a sample too small to yield meaningful values

GROWTH PROJECTIONS

		Integrated Design/Build	Design Services/ Consulting	Construction
In the next 5 years, do you think the use of design/build as a project delivery method will ...	Increase	98%	65%	83%
	Remain the same	2%	31%	17%
	Decrease	0%	4%	0%
Do you think that there will be an increase in the use of design/build in the public sector within the next 5 years?	Yes	95%	73%	93%
	No	2%	23%	7%
	Unspecified	2%	4%	0%

NOTE: Due to rounding, percentages for some questions do not total 100.

The survey excerpted above is the *2005 Design/Build Survey of Design & Construction Firms*. The data from this report were collected in November and December of 2004. ZweigWhite Information Services published the survey in partnership with the Design-Build Institute of America (DBIA).

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Social Security Administration, Birmingham, Alabama

The U.S. General Services Administration is increasingly relying on design-build competitions to procure new facilities. The agency recently contracted with a single-source provider, The Opus Group of Minneapolis, to replace an existing Birmingham facility with a modern office building for the Social Security Administration. Although technically working for Opus, HOK Architects led the design process.

PHOTOGRAPHY: COURTESY THE OPUS GROUP

house. In a meeting with the local building-committee chair, the young architect indicated that it was time to speak to the person who was going to build the project. “After a long pause,” recalls Buchanan, “the chair responded with, ‘You are the architect, aren’t you going to build it?’ He just assumed that’s what we did, and I said, ‘Sure.’ ”

Buchanan ended up crafting a construction management relationship in which he was paid hourly to design, draw, procure materials, and manage the building process. Through this experience, he discovered that only about one third of the drawings were relevant. Much of the design was done during construction—often through sketches done on the reverse side of the blueprints lying on the hood of his pickup truck. Through this process, Buchanan came to believe that “design and construction are one process. And without understanding that whole process, I don’t think you can fully serve.”

Today, Buchanan and his partner, John Yonushewski, run a 45-person design-build firm that aims to satisfy the myriad facility needs of its clients—from design and construction to overall development. “When my client has a problem, I see it as an opportunity to expand my business,” says Buchanan. “We become a trusted partner, so the client calls us instead of three separate companies. BYG is a one-stop shop.”

Buchanan shares the concern many practitioners have about the quality of design-build projects led by contractors who do not truly value the role and expertise of the architect. But he feels that architects can avoid this problem altogether by leading the design-build project themselves: “BYG is doing what we do because it allows the design to be part of the entire process. We are in charge of the entire quality from first to last day. There are so many decisions being made in the field. I don’t know how else to accomplish this without the architect being the contractor as well.”

Risk: architecture’s bogeyman

One of the biggest fears architects have about leading a design-build project is the increased risk associated with construction. While the tasks traditionally associated with architecture are insurable, work occurring on a construction site is not. There is, however, a huge opportunity for architects who take that risk because, explains Buchanan, the profit on the construction fee will be six to 10 times greater per dollar volume than that on the architectural fee. Risk, therefore, is not managed by insurance but by significantly higher profits that can be used to correct any defective work that may occur in the field.

For Buchanan, there are scenarios in design-bid-build that are much riskier: “The only time I have ever had a threat of legal action was

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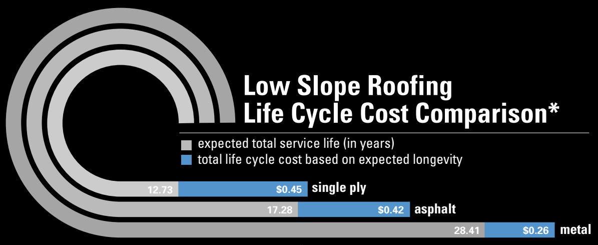

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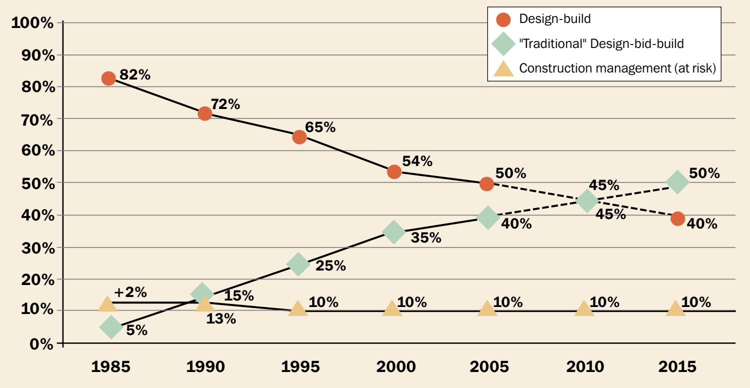

Source: Design-Build Institute of America 2005

when I was the architect for a project that was being built by a general contractor who wasn't qualified—now, that is scary."

In contrast, Buchanan feels that he is in the best position to come up with the best solutions when problems do arise because he knows his designs so well and because there is only one company involved. "If there is a problem in the field, it's our problem. There is not this do-si-do where everyone gets into a defensive mode—making sure the blame lies elsewhere—but no one is looking for a solution. We go into 'fix-the-problem' mode right away, because that's what the client wants."

Buchanan also believes there are additional safeguards inherent to running a firm with both design and construction services: During the inevitable vagaries of business cycles, one side is often able to keep the other side afloat.

One method doesn't suit all

Supporters of design-build do not suggest that every project must be done according to this method of delivery. Quatman indicates that design-build is most useful when a project is driven by cost and schedule. And Hellmuth believes that it is best suited to a project whose program is well defined from the start by the client. Nor do they believe every architect has the personality to lead a design-build project. "The world of construction is urgent and in your face, and things don't go as planned. It's not for someone who prefers to have all his or her ducks in a row months ahead of time," warns Buchanan.

But for those interested in getting started in some capacity, there are a host of resources available. Quatman's own book, *Design Build for the Design Professional*, published by Aspen Law & Business, offers an encyclopedic reference for virtually all aspects of this delivery method, including chapters on insurance, bonding, and contracts. Practitioners are encouraged to attend seminars hosted by AIA and DBIA on the subject. And, perhaps the most common piece of advice given on this topic, architects should begin networking with builders that they know and trust. ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- **Read the article "The Hopes and Fears of Design-Build" using the learning objectives provided.**
- **Complete the questions below, then fill in your answers (page 254).**
- **Fill out and submit the AIA/CES education reporting form (page 254) or download the form at www.archrecord.com to receive one AIA learning unit.**

QUESTIONS

1. What percentage of nonresidential construction projects are using the design-build approach?
a. 20 percent
b. 30 percent
c. 40 percent
d. 50 percent

2. Design-build is predicted to become the the leading method of project delivery by what date?
a. 2007
b. 2010
c. 2012
d. 2015

3. When the client holds one contract with the design firm and another contract with the builder, this is known as?
a. design-build
b. design-bid-build
c. master builder
d. construction management

4. AIA members did not participate in design-build projects until recently for which reason?
a. they were not taught the design-build process in school
b. the design-build process is a completely new concept
c. the AIA Code of Ethics forbade its members to participate in design-build until 1986
d. malpractice insurance did not cover design-build until recently

5. Currently, how many states have laws that permit some level of design-build for public projects?
a. 24
b. 30
c. 40
d. 44

6. Which group is demanding design-build because it saves time, money, and reduces conflict?
a. architects
b. builders
c. clients
d. insurance companies

7. Risk associated with design-build is managed by which?
a. profits
b. insurance
c. contracts
d. relationships

8. One of the biggest fears architects have about leading a design-build project is which?
a. losing their insurance
b. getting their insurance to cover the project
c. the risk is not insurable
d. their profits will be lower

9. The finished quality of a design-build commission depends on which?
a. the relationship between team members
b. the value placed on design
c. the role the architect plays in the team
d. the relationship between team members and the value placed on design

10. In the 2005 survey, which percentage of the firms' design-build projects were headed by a contractor?
a. 55 percent
b. 26 percent
c. 11 percent
d. 5 percent

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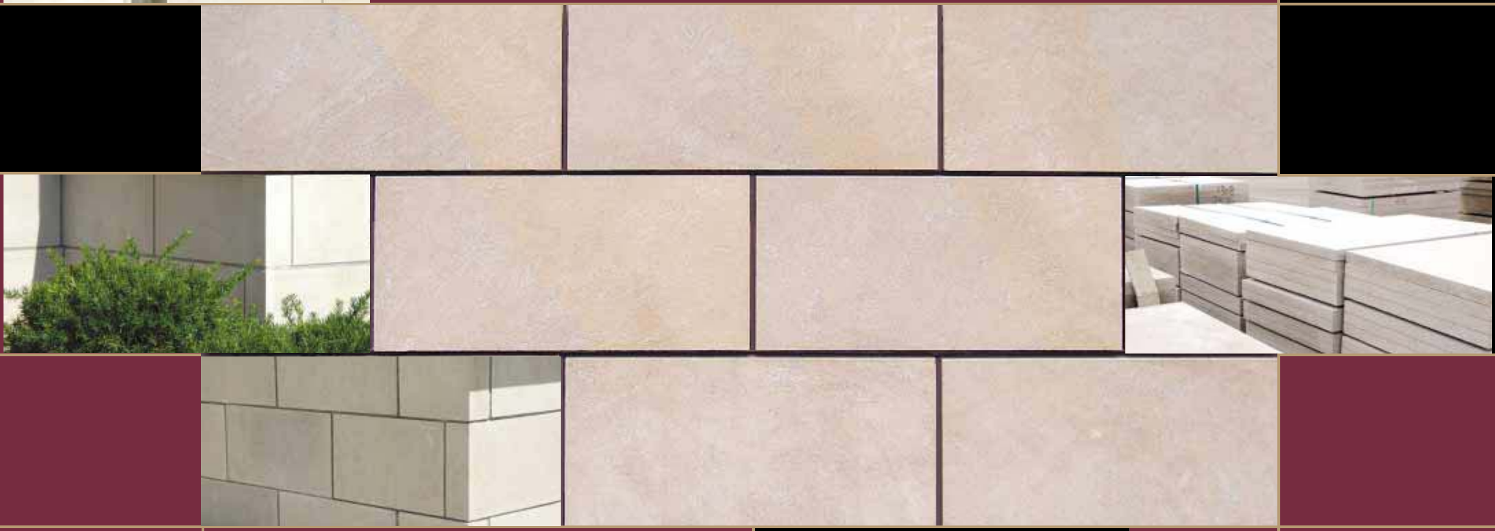

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Tech Briefs

Systems: Major upgrades maintain the architectural integrity of an iconic museum • Sustainability: AIA meets with industry groups to help flesh out a green-building policy

Sixteen years later, engineers fix leaks and overheating at Eisenman's Wexner Center

With its scaffoldinglike painted-metal facade, complex geometrical patterns, and creative siting and layout, Ohio State University's Wexner Center for the Arts (WCA) in Columbus was hailed as groundbreaking architecture, a rage against the white box, when it opened in 1989. Its ample glazing and skylight returned natural light to the museum setting—much to the delight of critics, if not building managers. These systems were plagued by performance troubles from the outset and proved inadequate to protect artwork or regulate temperature and humidity. On October 30, the Wexner's galleries reopened after a major $15.8 million overhaul by the New York office of Arup, the international engineering firm.

Designed by Peter Eisenman with local architect Richard Trott, the $43 million Wexner Center featured a double-glazed, multicolored, 14,900-square-foot glass curtain wall, as well as an ambitious 6,000-square-foot, 350-foot-long skylight. Though state-of-the-art at the time, all that glass allowed too much natural light into the gallery spaces, causing temperature swings of up to 40 degrees inside and overwhelming the HVAC system. Worse, the skylight leaked.

The center took action right away. They covered the skylight with a roofing membrane and applied a polyester film to the curtain wall, which cloaked the gallery spaces in darkness and created an unpleasant, cavelike atmosphere. Museum officials "always understood these would be temporary solutions at best," says Wexner's director Sherri Geldin, who joined the center in 1993, four years after the building opened. "Nonetheless, it was necessary to pursue them at the time."

Following an engineering evaluation of the building, WCA officials decided to close the gallery spaces for a full renovation. The goals of the project were clear: to secure the building envelope; restore luminosity to the galleries through precise calibration of natural light; and to upgrade temperature- and humidity-control capabilities. WCA leaders also decided to renovate public spaces at the same time, including the bookstore, café, reception area (none of which were designed by Eisenman), and the film and video theater. Arup, which had performed the initial review of the building's performance, joined the project as the prime engineer and designer in July 2003. Construction began a year and a half later.

Arup maintained the architectural integrity of Eisenman's design for the Wexner Center for the Arts in Columbus (above and left), but brought its envelope and systems into compliance with current standards.

PHOTOGRAPHY: COURTESY WEXNER CENTER FOR THE ARTS

Although the renovation team could have "done away with the curtain wall," the university and the Wexner Foundation recognized the importance of the building as an icon of its era, says Geldin. Arup and its collaborators went to great lengths to make sure that functional changes did not alter Eisenman's design. "Everyone realized this was an engineering project, not an architectural project," says Arup principal Nigel Nicholls. To ensure that the renovation was consistent with the Eisenman-Trott design, WCA hired Jerome Scott Architects, a local firm, as a design consultant. The firm had worked with Eisenman on the Columbus Convention Center and other projects, and also served as architect of record for the renovation of the public spaces and the film and video theater. "My goal was that when we walked away, no one would know anything had been done to upgrade the building," says firm president Jerome Scott.

An integrated approach

Like its design, the Wexner's original glazing and skylight systems pushed the envelope, says Nicholls. "But building technology has advanced significantly in the past 15 years," he says, particularly for glazed curtain walls that benefit from better coatings and improved manufacturing techniques.

Arup took an integrated approach toward the renovation, understanding that the building's problems were interrelated. "Each time one element of the building's systems was addressed, an analysis had to be done to see how it affected the others," says Nicholls.

First, a comprehensive condition survey of the center's 13,000 square feet of gallery space was conducted using computational fluid dynamics (CFD) to evaluate how air flow over the curtain wall affected condensation and humidity levels. In the design of the new curtain wall and skylight system, CFD was used to ensure that changes in temperature and humidity would not cause condensation to form on the interior

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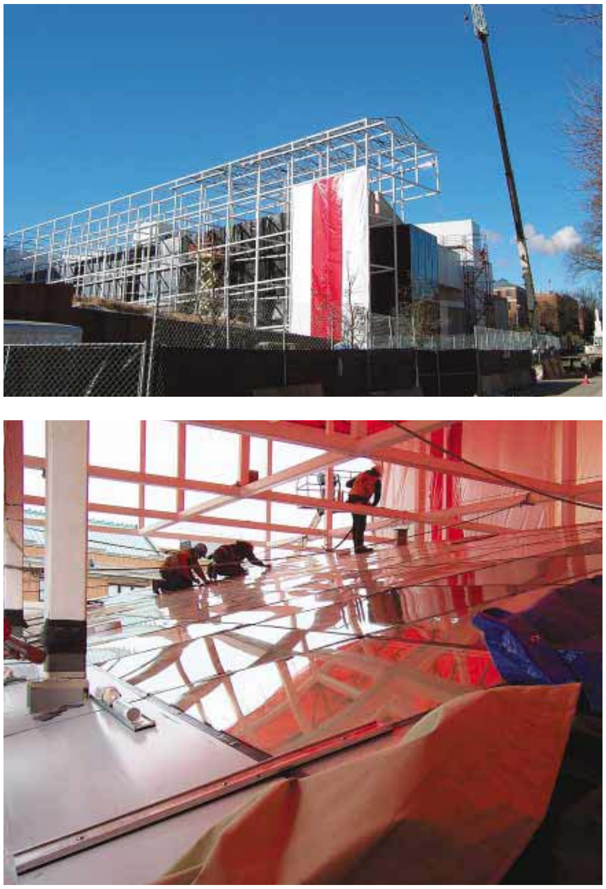
of the mullions and glazing. The analyses were confirmed by constructing and testing a full-size mock-up of the new curtain wall and skylight in a Pennsylvania laboratory. This process resulted in the design of a triple-glazed curtain-wall system comprised of heat-strengthened, low-iron glass, with argon-filled air spaces and reflective coatings.

One of the more arduous endeavors was maintaining the aesthetic of Eisenman's notational grid composed of the multicolored glass panels, a parti that expresses the different axes and reference points that had been used in the past to survey the Wexner's surroundings. In the renovation, the transparency of the panels—which featured four shades of gray, ranging from almost white to nearly black—was reduced "a notch," says Nicholls, using translucent glass to avoid creating "hot spots" and strong shadows. A combination of interlayers provides varying levels of diffusion inside.



Workers replace the Wexner's skylight with a highly engineered triple-glazed system (above). The construction called for maneuvering around Eisenman's scaffoldinglike facade (top).

Letting the light back in

For the lighting system, engineers modeled the building using the software package Radiance, and designers blended natural light with a new tungsten halogen system from Erco to maintain good light quality within the gallery spaces, says Arup lighting designer Brian Stacy. The darkest gray color in the grid is now slightly darker than the original, but the end wall on the north facade remains entirely transparent, allowing views into the Wexner from the entrance ramp and maintaining the connectivity between the outdoors and indoors.

While computer modeling of lighting levels was integral to the process, according to Scott, final decisions were made the old-fashioned way—by holding up a seemingly endless number of glass samples to the light and looking at them.

Improvements to the building's HVAC and controls are even more invisible, but no less complex. Temperature-control specifications numbered 19 pages for the original design, compared to a whopping 84 pages after the renovation. Engineers modeled the system's design and performance using CFD, and ultimately chose triple-redundancy controls and air-handling units equipped with gas-phased filtration, both common in museum galleries today. The team was able to retain the building's existing ductwork.

In some ways, the renovation has taken Eisenman's design beyond its original potential, says the WCA's Geldin. The overhaul allowed the removal of a vestibule and an accompanying air lock, designed by Eisenman as an afterthought to provide ingress and egress to a performance space. Removing this vestibule in favor of creating a more appropriate exit space for the performance space restored Eisenman's original plan for the gallery, says Geldin. Even the basement-level bookstore now celebrates the original design by using previously hidden fragments of brick masonry from an armory that burned on the site in the 1950s, to which Eisenman paid tribute with the the center's prominent brick masonry turrets. An enlarged lobby reception desk also accentuates the armory's masonry pier fragments that frame its exterior. *Larry Flynn*

(Tech Briefs continued on page 180)

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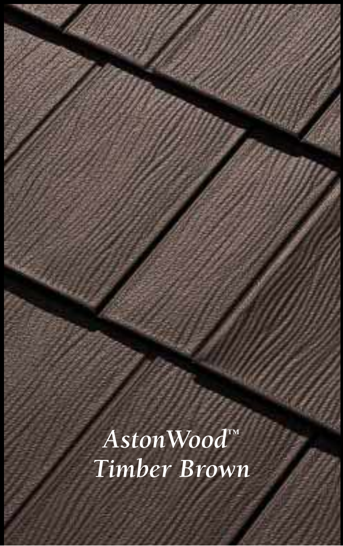

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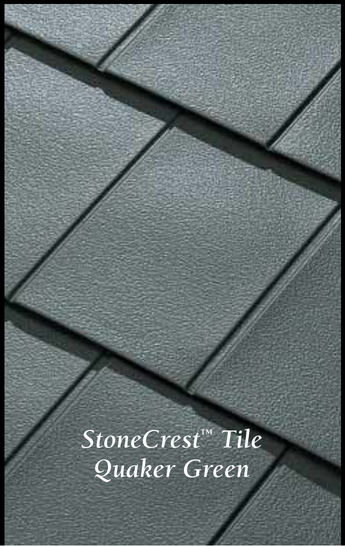

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Task force helps shape sustainability agenda for the AIA

In October, a specially convened task force that met last summer to review sustainable building standards prepared draft recommendations to be presented to the board of directors of the American Institute of Architects (AIA) on the institute's role and policies with respect to the practice of sustainable design.

The need to flesh out a position on this matter came from two directions, says Tom Wolfe, AIA's director of federal affairs. First, AIA members consistently rate sustainability high on their list of priorities, and the institute needed guidance on how to pursue that agenda. Second, various green-building organizations have been lobbying state and local agencies to adopt green-building policies, and policymakers were seeking input from AIA chapters, which in turn sought guidance from the national AIA. To date, the most active lobbying group has been the Green Building Initiative (GBI), which promotes a Canadian Web-based rating system known as Green Globes. GBI was established by industry associations that object to some aspects of the U.S. Green Building Council's LEED rating system, such as its definition of sustainably harvested wood, which is based on a system that some manufacturers believe is too restrictive.

The National Association of Realtors in Washington earned a silver LEED rating, one rating system AIA is assessing.

From Wolfe's perspective, there was little question that LEED, which has become a de facto standard in the U.S., is the superior system. But the fact that powerful industry groups oppose LEED gave him the impression that lobbying Congress for LEED-based tax credits would be a wasted effort. So the AIA convened a two-day policy meeting this July in Washington, D.C., at which the task force heard presentations from various stakeholders. Panelists invited to give presentations included representatives of LEED and Green Globes, the federal government, and the two trade associations that have been most vocal in opposing LEED. The chair of AIA's Committee on the Environment (COTE), Vivian Loftness, FAIA, was unavailable to participate, but in her place Bob Berkebile, FAIA, and Sandra Mendler, AIA, both past chairs of COTE, provided the group with its primary green-building expertise. All three are current or former board members of the USGBC.

In an e-mail distributed prior to the Summit, the nonprofit group Healthy Building Network attacked AIA for setting up a panel that appeared weighted against LEED. Questioned about the decision to include industry groups but not environmental organizations, Wolfe pleaded ignorance, saying it was his mistake not to invite the latter. "I believed we were going in the direction they'd be wanting us to go anyway," he says.

The task force heard from panelists for most of the first day, then deliberated the next day. In the end, they may have been most influenced by a presentation the evening before the event by Ed Mazria, author of the seminal 1970s book *The Passive Solar Energy Book*, and a leading advocate for energy-efficient architecture. Partly in response to his appeal, "There is a desire to put the institute on record as being behind legislation that will change the nation's energy policy," Wolfe says.

The task force's initial recommendations comprise two components. The first describes a comprehensive agenda in promoting and supporting sustainable design efforts, including aggressive targets for energy conservation, collaboration with other organizations, curriculum development, research, and documentation of its benefits. The second responds to the controversy surrounding green-building rating systems. The task force does not endorse a specific system, but instead describes the elements that AIA values in a rating system.

Based on the issues identified so far, Berkebile believes LEED will come out far ahead of Green Globes, especially now that USGBC has modified its bylaws to allow trade associations to become members. The list includes elements that the rating systems aspire to include but have not yet managed to integrate, such as the acknowledgment of regional differences in priorities. *Nadav Malin*

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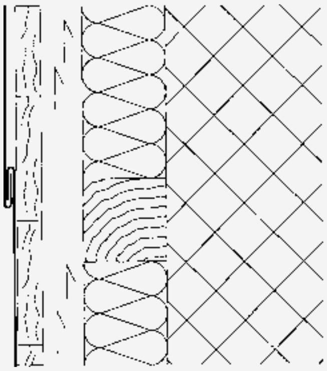

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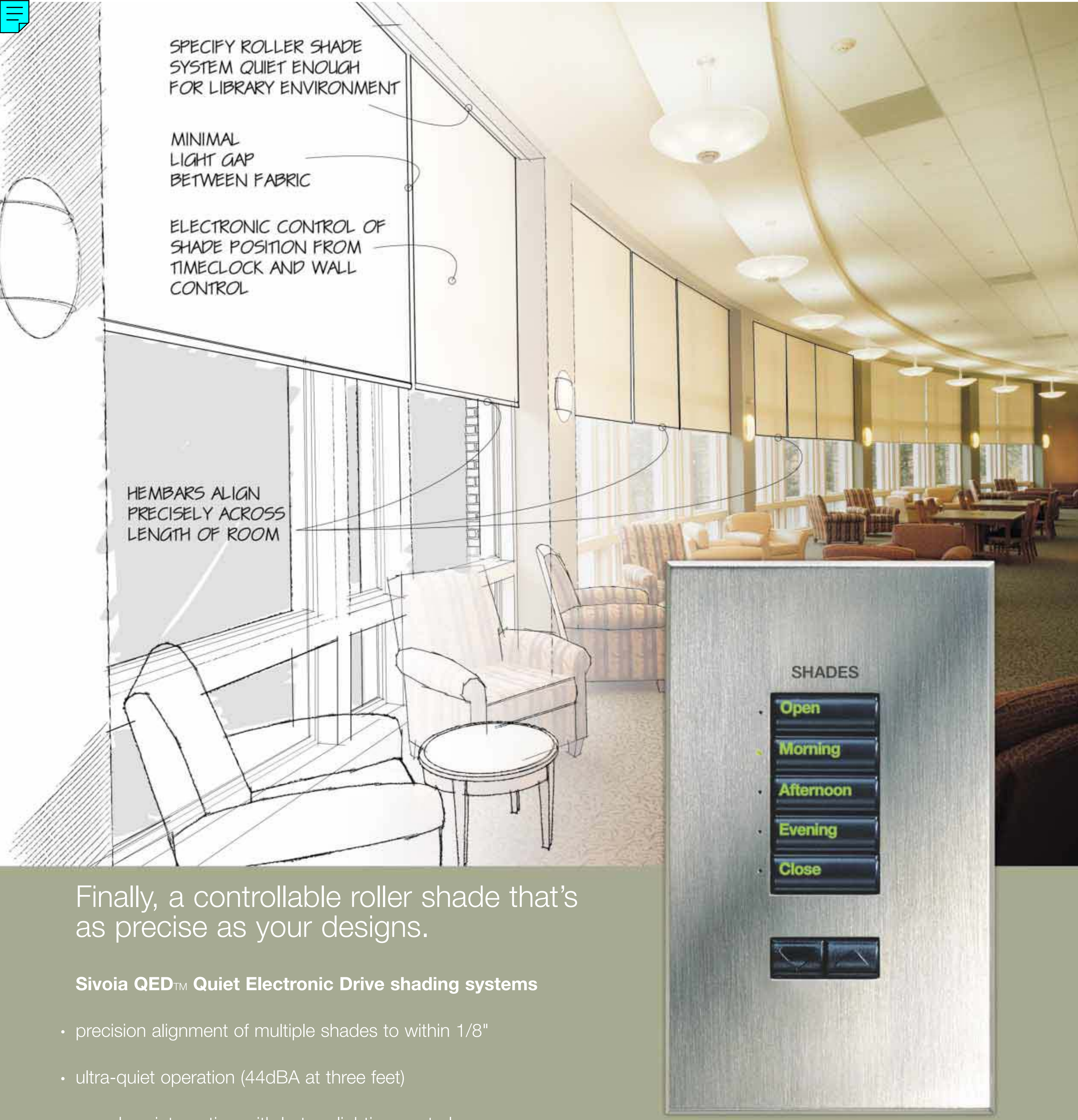
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LUTRON PRESENTS

Daylight in the Office Space

Light is a dynamic element of the built environment. Amidst concrete, glass, and cubicle walls, light provides a critical link between the earth, the building, and the individual. In an office building, light is necessary for the employee, an operational expense for the building, and supplied by the environment. Electricity is expensive and, of all building systems, lighting is typically the largest consumer of electricity. Natural light is free, but its availability fluctuates every day in both time and quantity.

How a building is lit impacts a variety of factors, from overall building performance and space functionality, to the interior and exterior aesthetic, and the way in which the building interacts with the neighborhood and environment. While the design of the interior lights is often specified by project engineers or lighting designers, the design of the building envelope and the window-to-wall ratio rests upon the shoulders of the architect. As more windows are added into a project, more natural light is invited into the space.

CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **Daylight in the Office Space** to earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 187, then follow the reporting instructions on page 256 or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Identify potential benefits and dangers of incorporating natural light into an office space.*
- *Understand strengths and weaknesses of different natural light control systems.*
- *Specify appropriate fabric characteristics to meet project requirements.*

Incorporating natural light into an office space creates an opportunity to improve the environmental performance of the project, while promoting individual well-being and enabling capital building investments to provide better economic returns. In order to realize these potential benefits, the natural light must be effectively controlled. Today, there is a variety of technologies that provide natural light control. Architects can use these technologies as tools to tailor their designs to best fit the people and business goals of the spaces they create.

Natural Light in an Office Space and the Individual

The most basic goals in office space design are to create a place where work can be accomplished and communication can occur. Today, light is instrumental in creating that productive environment, because 90 percent of the communication in the workplace occurs visually. From reading and writing email messages to seeing a co-worker's body language and facial expressions, people use their eyes to interpret the world around them, and their eyes require light.

The same light that is the medium for visual communication also impacts the mood, health, and behavior of the employees it touches. Both natural and electric light can illuminate a space, but they do not impact people equally. Studies have corroborated a long-held belief that there is a strong correlation between positive mood and daylight exposure. Recent studies also imply that incorporating outdoor views into the office will positively effect employee motivation, satisfaction, productivity, and comfort, which can manifest in improved employee retention and workforce output.

Natural Light in an Office Space and Building Performance (Financial Efficiency)

In the United States, the peak demand of electricity occurs during standard business hours. The price of electricity used during peak demand times is higher than the price of electricity used when the overall demand wanes. Effectively using the daylight available during those business hours not only reduces the total electricity demanded by lighting and HVAC systems, but also reduces peak demand, minimizing the use of the most expensive electricity. Saving one kilowatt-hour (kWh) of energy during daylight hours saves a building more money than saving that same kWh at midnight.

Natural Light in an Office Space and Sustainable Design

The Leadership in Energy and Environmental Design (LEED™) rating system recognizes that incorporating natural light and views into a building can promote occupant well-being, while reducing the amount of electricity used by the lighting and HVAC systems.

LEED is a rating system sanctioned by the U.S. Green Building Council (USGBC) that provides a national standard for what constitutes a "green" building. LEED principles promote buildings that are environmentally responsible, profitable, and healthy places to work.

The rating system is composed of six categories: Sustainable Sites (SS), Water Efficiency (WE), Energy and Atmosphere (EA), Material Resources (MR), Indoor Environmental Quality (EQ), and Innovation and Design Process (ID). There are a total of 69 LEED credits available between these six categories. Twenty-six credits are required to attain the most basic level of LEED certification. Incorporating natural and electric lighting control into a project can contribute toward earning up to 22 LEED credits.

The Indoor Environmental Quality category offers up to two credits for providing building occupants with a connection to the outdoors by incorporating daylight and views into regularly occupied areas of the building. As specified in the Version 2.1 of the *LEED Reference Package for New Construction & Major Renovations,* to earn credit 8.1, "75 percent of all spaces occupied for critical visual tasks must achieve a minimum Daylight Factor of 2 percent, excluding all direct sunlight penetration." Credit 8.2 mandates that "occupants in 90 percent of regularly occupied spaces must have a direct line of sight to vision glazing."

The Energy and Atmosphere category offers up to 10 points for reducing the electricity consumption and costs attributed to various building systems (ASHRAE/IESNA Standard 90.1-1999 is used as the baseline). The interior lighting and HVAC systems are two of the systems considered by this credit. Using natural light to reduce a building's peak energy demand upon these two systems effectively reduces both the overall electricity use and cost.

For more information on LEED, visit www.usgbc.org.

Adding daylight into an office space can boost building and employee performance. However, effectively incorporating natural light into an office space requires greater consideration than simply increasing glazing area. Natural light needs to be managed and controlled. The fenestration is no longer just metal and glass. Instead, it is glass, metal, and a dynamic shading component.

Natural Light and Heat

Natural light is a tremendous source of light and heat. As more natural light is designed into a space, project architects and design teams are challenged to ensure that the light and heat are appropriately controlled. Without control of natural light, those highly coveted views to the outdoors can cause disruption and discomfort, while sending the building's HVAC demand soaring. The glare, solar heat gain, and exposure to UV radiation caused by uncontrolled daylight can negatively impact occupant comfort, building performance, and interior fabrics and furnishings.

Glare and Brightness

The word brightness is used to describe the intensity of a light source. People perceive the brightness of an object in contrast with its surroundings. Car headlights on a clear sunny day are barely noticeable. The same car headlights on a dark stretch of highway can be so brilliant that they are uncomfortable to look at. Glare occurs when a light source or the reflection of a light source is significantly brighter (generally more than three times brighter) than the ambient light surrounding it, causing visual discomfort.

Visual discomfort is the result of the human eye's inability to adapt appropriately to the contrast in light intensities in its field of vision. Adaptation is a chemical process that takes place on the surface of the retina, regulating the eye's sensitivity to light. In bright environments, this sensitivity decreases, because more visual stimulus is available. In darker settings, sensitivities increase. The change in sensitivity is uniform across the eye, leaving few options to compensate for hot spots and areas of irregularity. If the sensitivity increases to read the brightest object, the surrounding areas are too lowly lit to be seen clearly. If the eye's sensitivity to light increases in order to interpret the surroundings, the intensity of the brighter object becomes glaring.

Accommodation is the physiological response that compensates for shortcomings in adaptation. Accommodation is the muscular process that limits the amount of light entering the eye by constricting the pupil and squinting. People can also accommodate their visual environments by lowering their heads and furrowing their brows. This is often an unconscious, automatic response, like blinking when the eyes are dry.

In an office space, both natural and electric light combine to create the light environment. Glass windows can deliver daylight into the workspace that ranges in quantity from a few hundred lux (lumens per square meter), on an overcast day, to over 10,000 lux on a clear sunny day. In contrast, the average light level recommended for an office space is between 300-500 lux, which is often what the electric light in the building is designed to provide. If the disparity between the intensities of the task lighting, the ambient light and the direct or reflected daylight in the employee's visual field is too great for the eye to accommodate through adaptation, glare occurs.

On a dark highway, the exposure to glare is brief and infrequent, lasting as long as it takes for the two cars to pass one another. In an office space, an employee could be subjected to glare for several hours nearly every day. Physically unable to adapt to glare conditions, employees and building occupants spend their days accommodating the visual environment with involuntary contractions of the pupil, squinting, modifying the position of their head, and furrowing their brows.

Repetitive use of these accommodation tactics can lead to stress injuries and muscle fatigue that manifest in the forms of eye strain, headaches, and computer vision syndrome. These problems are uncomfortable, fatiguing, and attribute to decreased productivity in the workplace.

Harsh sunlight can create uncomfortable working conditions. Specify roller shades to keep glare to a minimum and reduce eye fatigue for workers.

Direct rays of sunlight are prone to causing glare, because their intensity has not yet been filtered or modified. One way of minimizing the threat of glare from natural light is to specify a device in the window that will either block, deflect, or diffuse direct sunlight. This reduces the intensity of the natural light entering the office space and the likelihood that glare-causing hot spots will occur.

Solar Heat Gain

One of the largest building expenses caused by uncontrolled daylight is due to solar heat gain. The sun's radiant energy appears in the Earth's atmosphere as visible light, UV radiation, or heat, depending upon its wavelength. Solar heat gain refers to the amount of solar heat energy that passes through the windows and walls, warming the building's interior. The amount of solar heat energy that is transmitted into a space can be measured in British thermal units (Btu).

The Btu is the universal heat energy unit required to raise the temperature of one pound of water 1 degree Fahrenheit.

As window-to-wall ratios increase to allow more natural light into the structure, more and more of the building's envelope becomes glass, instead of brick, concrete and steel. The thermal transmittance of glass is much higher than that of other structural materials, making a building with a lot of glass more susceptible to solar heat gain.

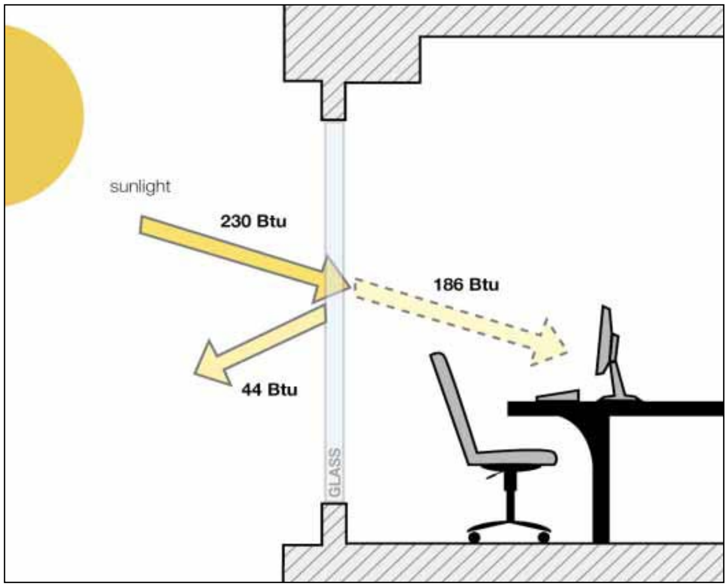
The amount of solar energy present at any given time is dependent upon the latitude and orientation of the space and the weather conditions of the day.

(See Figure 1) This representation illustrates the thermal interaction between sunlight and a glass window in an office space located approximately in New York City. In this example, the 1/4" clear plate of glass reflects only 20 percent of the available Btu. 80 percent of the sun's heat energy radiates into the interior.

As more of the sun's light and heat energy is allowed into a space, the interior is warmed and a greater demand is placed upon the HVAC system to keep building occupants comfortable.

Specifying a device to be an additional barrier between the window glass and the building's interior space creates an opportunity for some of the solar energy to be reflected back outside or absorbed by the apparatus, before seeping into the occupied spaces. Both color and composition of this barrier device are important considerations when determining which technology to select.

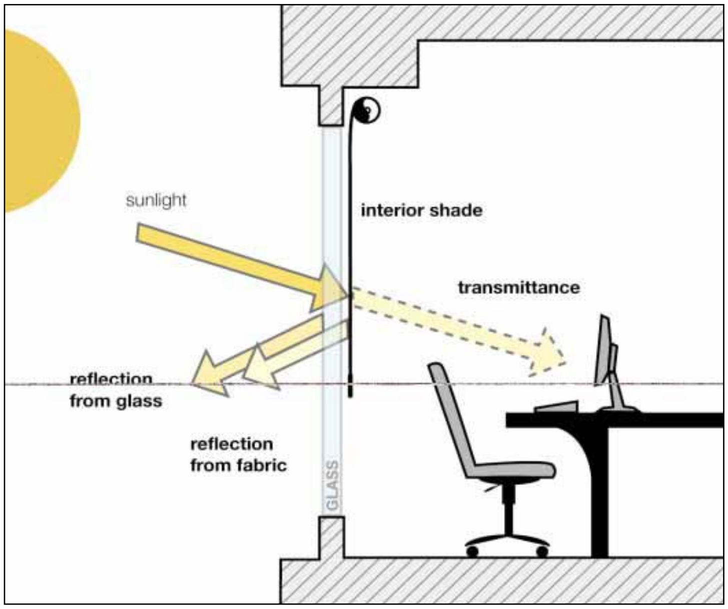
Even with the potential threats of glare and solar heat gain, the potential benefits of including daylight in the workplace to both employees and building performance are considered significant enough to continue exposing office spaces to the outdoors. This demand for daylight in the workplace has driven the development of numerous technologies designed to manage the impact that natural light can have on a space. It has also been a catalyst for the popularity of the daylighting movement.



(Figure 1) A building located in New York, with a 1/4" clear plate of glass, transmits roughly 80 percent of the present solar radiation into the building.

The Art of Daylighting

Daylighting is defined as the proper utilization of daylight to reduce energy consumption in the interior of buildings, while reducing sun glare and protecting the visual ergonomics of the space. Daylighting employs a regulated balance of electric and natural light in conjunction with the other building systems, finishes, fabrics, and furnishings that combine to make up the building's interior. To maximize the benefits of daylighting, daylight should be controlled.



Specifying an additional barrier between the window glass and the occupied interior will reduce the amount of solar radiation allowed into the space. The actual amount of solar radiation reflected, absorbed, or transmitted will vary by color and composition of the barrier.

A variety of technologies have been developed to control daylight, including, but not limited to, horizontal louvers, vertical blinds, draperies, and roller shades. These control devices range in price, flexibility, and ability to effectively manage light, minimize glare, preserve outdoor views, allow for privacy, reduce UV radiation, combat solar heat gains, and enhance "curb appeal" and property value by offering the opportunity for a more consistent façade appearance.

Horizontal Louvers (Mini-Blinds)

Horizontal louvers equip office windows with a "lift and tilt" system capable of partially or completely deflecting glare-causing light and repelling solar heat. Horizontal louvers can be positioned to direct available daylight more deeply into the space. When tilted closed, this barrier to light and heat also provides excellent privacy to building occupants, allowing zero view to outsiders looking in. Unfortunately, with manual louvers tilted to block solar heat, UV rays, and direct light, the view to the outside is almost completely compromised. Lifting or opening the louvers in order to see outside renders the apparatus nearly useless in terms of daylight management, exposing the interior to unfiltered solar energy.

Roller Shades

Roller shades reduce solar heat gain, UV penetration, and glare, while preserving the view to the outdoors. This valuable multi-tasking ability occurs when translucent shade fabric is used, acting as a finely woven light filter. The weave is so fine that the eyes move past it to the view beyond, while the fabric threads diffuse, absorb, or reflect the unwanted solar energy.

Roller shades, referred to as roller blinds outside the U.S., reduce solar heat gain, UV penetration, and glare, while preserving the view to the outdoors.

One thing to consider is that view can be two-sided. During the day, shades can provide building occupants with outdoor views. At night, if the interior of the building is sufficiently illuminated, it will be visible from the outdoors.

Curb Appeal is a Matter of Control

Curb appeal is not a strength of manual control. The ability to provide a consistent look from the outdoors is based on a system's ability to establish and maintain a uniform position for each component. Both blinds and shades can be manually controlled to accommodate differences in employee preference, time of day, and task. Placing the power of position in employees' hands is rarely conducive to achieving a consistent product height throughout an office space. When controlled manually, each blind or shade throughout a building can be positioned uniquely—up, down, or tilted, depending upon the preference, skill, and patience of the last operator.

Both horizontal louvers and roller shades can be automated or centrally controlled. The position and tilt of horizontal louvers can be controlled via automation. Automation guarantees that each shade is always positioned appropriately for maximum effectiveness and offers the opportunity for consistent curb appeal by programming shades to uniform, pre-determined heights throughout the building.

Types of Controllable Roller Shades

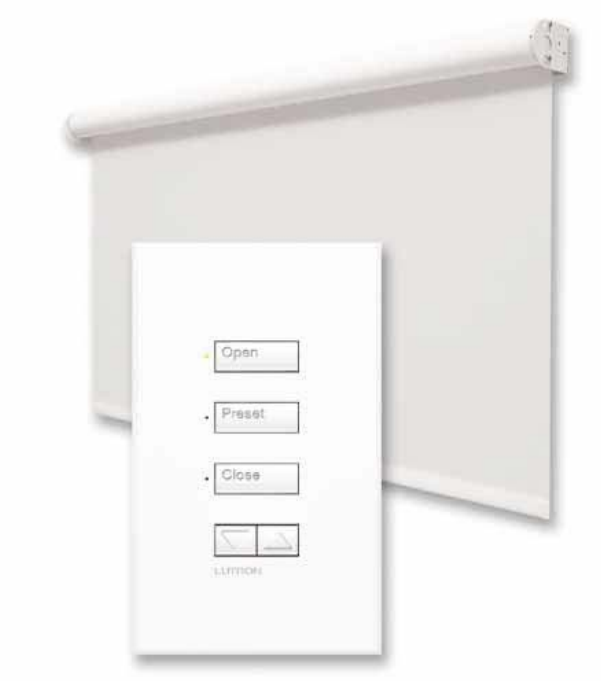
Today there are several types of automated roller shading systems available. Varying in sophistication and aesthetic appeal, an important differentiating factor between systems is whether it is automated with a motor or an electronic drive. Popular shading automation options include: AC-tubular motor systems, battery-powered motor systems, and low-voltage electronic drives.

AC-powered tubular motor systems have been used traditionally for exterior shade and awning systems. Especially popular in Europe, these powerful motors can support heavy fabric loads and are durable enough to withstand outdoor elements, such as wind and rain.

Although AC-tubular motors are a good solution for automating exterior shade and awning systems, certain characteristics (of AC shades) make this solution less desirable for interior systems for a variety of reasons. First, motors can be noisy and distracting when operated. Outside, this sound is drowned out by ambient noise. Inside an office space, it could be prohibitively distracting. Second, due to inherent variations in AC motor technology, these AC tubular motor systems cannot be relied on to track evenly over time.

Battery-powered systems are also available, providing wireless power and control. While great for retrofit projects, the lift capabilities and system size are limited by battery-power. With a battery life rated for between two to three years, replacement could be problematic in shades mounted in hard-to-access areas. Battery-powered shading motors operate with some audible noise (similar to a battery operated drill), and controlled movement and precision pre-sets with the battery-operated system are difficult.

Low-voltage electronic drive systems address many of the aesthetic and functionality concerns raised by the two previous technologies. Quieter than regular line voltage or battery-powered systems, electronic drives are capable of operating at 44 dBA at three feet, a sound comparable to a whisper. This near-silent movement can add an impressive element to a room's atmosphere, or occur almost invisibly without distracting room occupants. Intelligent electronic drive systems can be programmed to track multiple shades together, providing precise, coordinated movement across a wall or throughout a building. These systems can also be programmed with pre-sets. These pre-sets allow each shade in the system to be operated independently, to meet individual preferences, and then re-aligned with the rest of the shades in the group with one button press. ■



Roller shades automated with low-voltage electronic drives provide near-silent and precise movement of one shade or a coordinated group of multiple shades.

CLICK FOR ADDITIONAL REQUIRED READING
The article continues online at:
archrecord.construction.com/resources/conteduc/archives/0511lutron-1.asp
To receive AIA/CES credit, you are required to read this additional text. For a faxed copy of the material, contact Jeanette Fitzgerald at Lutron, (610) 282-6661 or fax (610) 282-6437. The following quiz questions include information from this material.

AIA/ARCHITECTURAL RECORD
CONTINUING EDUCATION Series

LEARNING OBJECTIVES

- *Identify potential benefits and dangers of incorporating natural light into an office space.*
- *Understand strengths and weaknesses of different natural light control systems.*
- *Specify appropriate fabric characteristics to meet project requirements.*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self-report form on page 256. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self-report form on *Architectural Record's* web site—*archrecord.construction.com*—to receive one AIA/CES health/safety/welfare Learning Unit.

QUESTIONS

1. Which building system is typically the largest consumer of electricity?
- **a.** HVAC
- **b.** Security
- **c.** Lighting
- **d.** Computer Network

2. Appropriately incorporating daylight and views into an office space does NOT contribute toward which of these:
- **a.** improved employee mood and satisfaction
- **b.** earning LEED credits
- **c.** reduced peak demand of electricity
- **d.** improved water quality

3. Uncontrolled natural light can negatively impact:
- **a.** Occupant comfort
- **b.** Fabrics and furnishings
- **c.** Building performance
- **d.** All of the above

4. Which of the following controllable roller shading systems provides near-silent operation?
- **a.** AC-tubular motor
- **b.** Low voltage electronic drive
- **c.** Battery-powered motor

5. Which of the following is NOT a benefit of natural light controls?
- **a.** reducing UV radiation into the interior
- **b.** increasing the demand on a building's lighting and HVAC systems
- **c.** minimizing glare-causing light in a spacels.
- **d.** preserve a view to the outdoors

6. Which statement correctly describes the functionality of horizontal louvers and roller shades?
- **a.** Neither horizontal louvers nor shades can be controlled manually
- **b.** Horizontal louvers are more adept at protecting interior furnishings against UV radiation
- **c.** Roller shades can provide a view to the outdoors, while combating solar heat gain and reducing glare. Horizontal louvers can either provide a view to the outdoors, or combat solar heat gain and glare
- **d.** There is no difference between horizontal louvers and solar shades

7. Solar absorptance describes:
- **a.** The percentage of glare-causing light that passes through the fabric
- **b.** The percentage of solar radiation reflected by the fabric
- **c.** The percentage of solar radiation absorbed by the fabric
- **d.** The percentage of solar radiation transmitted into the interior

8. The dual-sided fabric that most effectively combats solar heat gain, reduces glare, and preserves the view outdoors will…
- **a.** have a dark color fabric facing the interior and a light color fabric facing the exterior
- **b.** have a light color fabric facing the interior and a dark color fabric facing the exterior
- **c.** have a same color
- **d.** color doesn't matter

9. Which of the following statements is true about openness factor of a fabric?
- **a.** As the openness factor increases, more natural light is filtered
- **b.** As the openness factor increases, the view is limited to shapes and shadows
- **c.** A 10 percent openness factor allows zero light into the space
- **d.** Different openness factors of the same fabric may be specified on different facades of the same building to effectively manage different exposures to direct sunlight, without compromising curb appeal

10. Which statement correctly completes the following sentence? PVC-free and halogen-free fabrics…
- **a.** smell plastic
- **b.** support sustainable design by promoting healthy indoor office environments and can contribute toward earning LEED credits
- **c.** emit highly toxic smoke when burned
- **d.** increase the number of potential toxins that can be released into the environment

About Lutron

Lutron Electronics Co., Inc., (www.lutron.com) headquartered in Coopersburg, Pennsylvania, is the world's leading designer and manufacturer of lighting controls, lighting control systems, and shading solutions for residential and commercial applications.

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THE GREEN MARKET REACHES CRITICAL MASS

Lloyd Crossing Sustainable Urban Design Plan, Mithun
Source: 2005 COTE/AIA Green Project Awards

A New Survey Finds a Growing Commitment to Green by Architects and Product Manufacturers

As green building grows, so green products multiply. Since the PNC Financial Services' Firstside Center in Pittsburgh became the first U.S. Green Building Council's (USGBC) Leadership in Energy and Environment (LEED™) certified building in 2000, projects have ranged from the Phillip Merrill Environmental Center, Chesapeake Bay Foundation, by the SmithGroup to New York's Coney Island's recently renovated Stillwell Avenue subway station in Brooklyn, a solar-powered train terminal. In five years, 285 projects have been LEED certified and 2,164 buildings registered.

But, as one architect remarked recently, "green isn't what it used to be when people thought it meant only solar panels."

Whole companies are even going green. One large construction company, for example, has made a corporate-wide commitment to green building. Aside from greening its construction practices and building internal expertise, it is also sponsoring a series of green building meetings promoting sustainable design and construction in education.

The American Institute of Architects' national and state chapters have green agendas and project awards programs. The AIA Committee on the Environment (COTE) recognizes projects that address issues such as energy and water conservation and sustainable or renewable products and construction materials. The Eastern Sierra Residence in Gardnerville, NV, by Arkin Tilt Architects, one of the 2005 COTE Green Project winners, for example, contains structural insulated panels insulated concrete forms and Forest Stewardship Council (FSC)-certified wood.

This year the AIA launched its Sustainable Design Assessment Teams (SDAT) community assistance program, which brings a team of volunteer professionals to work with community decision-makers and stakeholders to help them develop a vision and framework for a sustainable future. In October 2005, AIA board member and charter president of GreeningUSA Peter J. Arsenault, AIA, NCARB, LEED-AP, Principal, Peter J. Arsenault, Architect, who led a SDAT team in Northampton, MA, reports that the team examined a range of

CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **The Green Market Reaches Critical Mass.** To earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 173, then follow the reporting instructions on page 267, or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Have an increased understanding of the expanding green market and its different sectors.*
- *Find sources of research findings on building energy conservation, productivity and efficiency*
- *Appreciate the importance of informed selection and specification of green products and materials.*

Phillip Merrill Environmental Center, Chesapeake Bay Foundation, designed by the SmithGroup, Platinum LEED rating, Photographer credit: Prakesh Patel

issues, including energy use and efficiency. He also notes that private developers of small and large projects see the benefits of green building because of the increase in value and the philosophy of providing a better product.

Surveying the AEC community

Clearly, the market for green products is expanding and the implications for architects and specifiers intriguing and significant. But is green still a fad as some believe? Does green really cost more? Do manufacturers mostly view green as a customer "value-add" rather than as a strategic planning factor? Where are the reliable sources for green information? Throughout the 15-year history of the green building movement, architects, engineers, owners, and building product manufacturers have argued these and many other crucial questions, and with the prospects of a potentially broader market, they will continue to provoke debate.

For the first time, the AEC community supplies some answers in a new report released this month titled *Green Building SmartMarket Report 2006**.

Researched by McGraw-Hill Construction's Research and Analytics with support from the USGBC, the report analyzes the green design and construction marketplace. It includes an overview of the green building movement, analysis of recently collected data from all sectors of the AEC, and interviews with leading building product manufacturers, federal agencies, and key green building innovators.

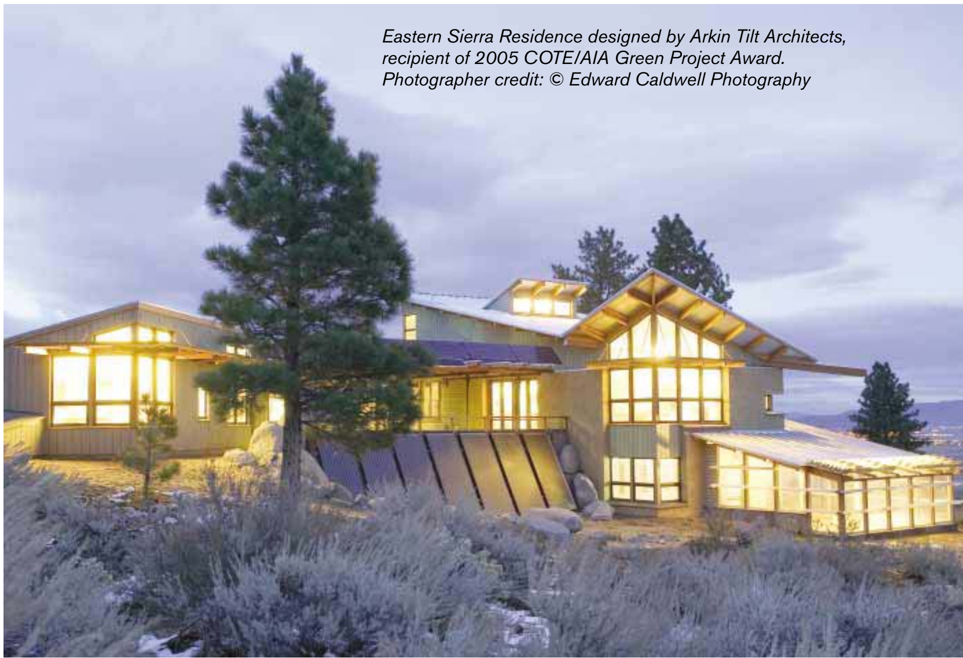
The survey, not only provides information on market trends, outlook and economic impact, it analyses the perceptions of all players in the industry and what triggers green building. It also provides documentation that green building is no longer a fad and sole province of the environmentally aware, but an established, emerging market with a critical mass, significant economic and societal impact, and many opportunities for smart players.

SmartMarket found significant engagement in green building on the part of the AEC community: 40 percent of a representative sample of architects, engineers, contractors, and building owners are more than moderately involved in green building. Even more are actively involved: 60 percent of architects, engineers, and contractors are specifying and installing green products.

SmartMarket projects that between five and ten percent of new construction starts (non-residential) will be green projects by 2010. In 2000, the green marketplace was only a fraction of a percentage. In 2004, green building comprised approximately 2 percent of the U.S. nonresidential market, which translates into approximately $3.3 billion. McGraw-Hill Construction forecasts U.S. non-residential construction starts will be worth approximately $204.5 billion in 2010. A projected growth of five to ten percent would mean between $10.2 billion and $20.5 billion in five years. On average, survey respondents expected the impact of green building on return on investment (ROI) to improve 6.6 percent.

How green is green?

Genuinely green products and materials are critical to successful green building and require long-term commitments to produce. Yet overall, as *SmartMarket* found, large building product manufacturers, who are the tipping point to broad diffusion of green building, take a conservative or measured position on green building, most likely due to a typical three-year product planning cycle. Green products or features are seen as "value-adds" to meet customer requests, rather than as high importance to their business planning or strategy. Industry leaders also expressed concerns about "greenwashing," the term used to describe unfounded claims by manufacturers that their products are environmentally preferable or beneficial compared with alternatives.



Eastern Sierra Residence designed by Arkin Tilt Architects, recipient of 2005 COTE/AIA Green Project Award. Photographer credit: © Edward Caldwell Photography

One manufacturer believes that there is a problem with the current "green" thinking—"green" should not be thought of as products in isolation but instead as a "system" in which all the pieces need to work together. Another reported being concerned early on in the movement that fly-by-night manufacturers whose products would not live up to long-term scrutiny would undermine the entire green movement and corrupt the green market. He now thinks that manufacturers have been reasonably responsible due to the LEED standards. Industry leaders do agree on one point—no green leader has emerged.

Producers already offering a line of green products are taking green to another level such as, for example, manufacturing wood fiber particleboard with no added urea-formaldehyde. Regarding such a product, says Ray Barbee, Vice President, Sales and Marketing for Roseburg Forest Products which owns 750,000 acres of timberland, of which approximately 40 percent is FSC certified, third party tests verify formaldehyde emissions to be similar to those occurring naturally in outdoor ambient conditions.

Green systems gaining growth

In contrast, green lighting controls and water conservation systems are growing fast. "Sensors have been around since the early 70s, but there wasn't a lot of momentum for using them because of the low cost of energy. Sustainability design and LEED has changed the ballgame, even in the past two to three years." says Paul Trively, Vice President of Specification Sales for Lutron. "I've been in this business 37 years and sustainability is the biggest thing I've seen." With lighting contributing 70-80 percent to a building's energy costs, owners and employers are now acquiring automatic lighting controls, which control daylight in different parts of a space, and shading that reduces solar load. Because employees are the greatest expense, they are also paying attention to productivity and giving their people more controls, he observes, especially in healthcare where the shortage in nursing staff is forcing employers to provide patients with more lighting and shade controls. It's important for design professionals and building owners to discuss and quantify the costs of aesthetics, security, life safety, configurable office space, and other lighting needs, notes Trively.

Buildings with innovative water conservation systems range from Vermont state rebuilt rest stop by Timothy D. Smith & Associates, near Sharon, Vermont, which recycles wastewater through a greenhouse, to the 2005 COTE winner Austin Resource Center for the Homeless, Austin, TX, by LZT Architects, Inc., which has a 13,000-gallon rainwater collection system that supplements the building's water supply. "The industry is seeing a fast growing demand for water conservation products," says Jim Allen, Water Conservation Manager at Sloan Valve.

Not all manufacturers are taking a measured approach to green. Employee-owned Columbia Forest Products, North America's largest manufacturer of hardwood plywood and hardwood veneer, has certified its woods with the FSC for a number of years. So rather than dedicate a portion of its production facilities to formaldehyde-free products, it has begun converting all three of its veneer-core hardwood plywood plants to formaldehyde-free manufacturing processes using a patented soy-based adhesive. Next year it will convert three more plants. It's important to provide a cost-competitive solution while increasing moisture resistance without urea formaldehyde, says Columbia executive vice president of sales and marketing Ed Woods, who points out that urea formaldehyde is classified by the International Agency for Research on Cancer, part of the World Health Organization, as "carcinogenic to humans."

*Austin Resource Center for the Homeless, LZT Architects, Inc.,
Photographer credit: © Thomas McConnell Photography
Source 2005 COTE/AIA Green Project Awards.*

Deciding what is green

Determining what is truly green can be relatively straightforward. "We've been using American hardwoods for centuries," says Susan Regan of the Hardwood Council, "and in contrast to some of the exotics and synthetics, there's no problem with hardwood toxicity, sustainability, or local availability. And durability is certainly a given with wood products' life cycles that span generations."

Other products are far more complex. Take vinyl or polyvinyl chloride for instance, used in siding, drain/waste/vent pipes, flooring, and windows. In 2000, during the process of developing LEED's Commercial Interiors rating system, credit was proposed for the avoidance of PVC materials. In December 2004, a USGBC task force released its draft report which found the "evidence does not support a conclusion that PVC is consistently worse than alternative materials on a life cycle environmental and health basis," and recommended against a credit for excluding vinyl in the LEED rating system. The USGBC Task Force is still reviewing comments from experts in different disciplines and will be releasing a final report.

Allen Blakey, Director of Public Affairs at The Vinyl Institute points out that vinyl is highly durable and has many benefits—vinyl windows are thermally effective and vinyl-roofing membranes reflect heat.

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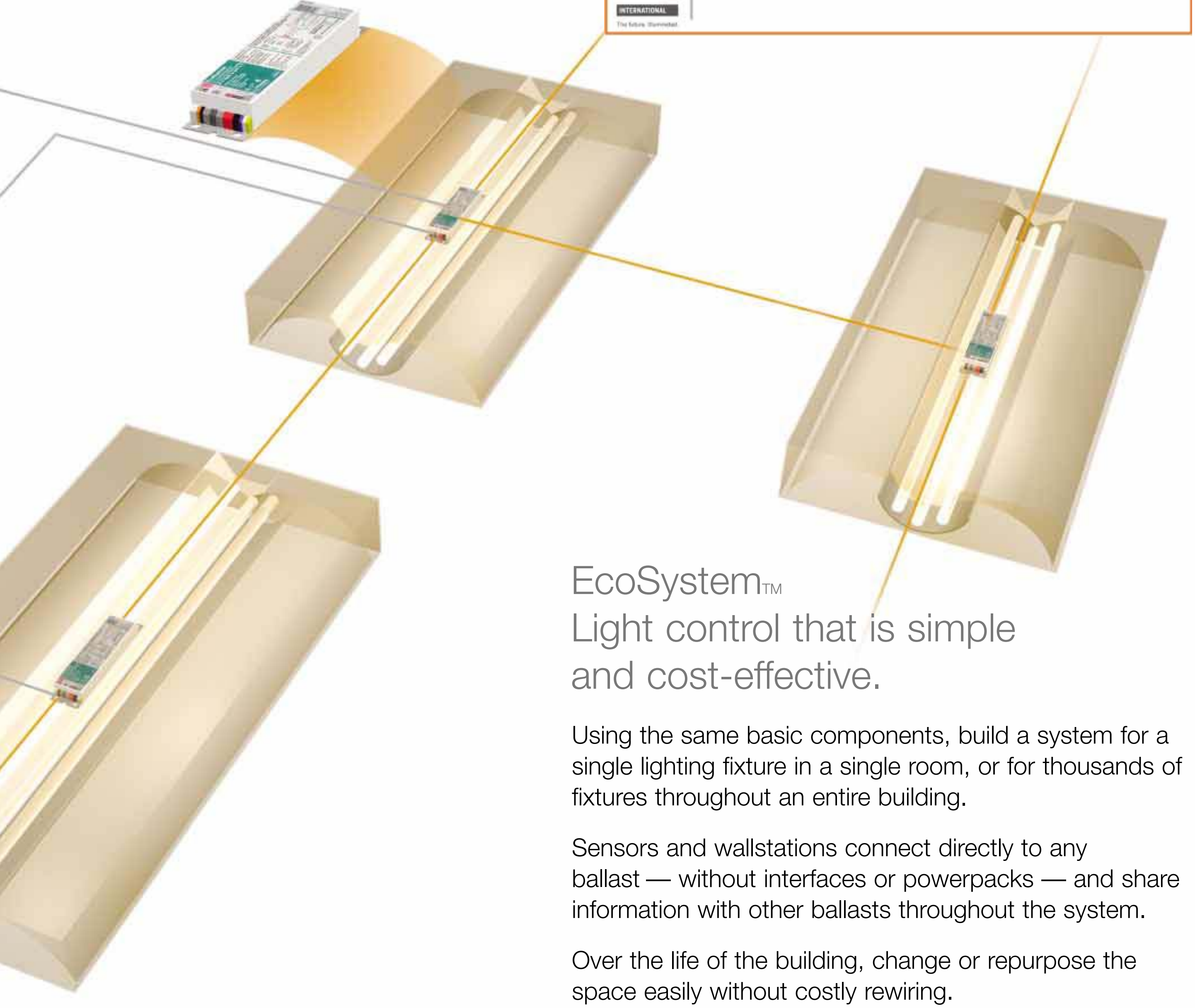

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Knowing the benefits of products is only part of the challenge of green design. Key to the design of any building is mastery of the specification process that earning a Construction Specification Institute (CSI) certificate provides. When applying for LEED certification, it is especially critical to avoid the risk of failing to attain certification due to a technical error. “Unique skills are necessary to develop the technical documents that permit the seamless integration of LEED's specific requirements into a project,” says former CSI president Ross Spiegel, FCSI, CCS, CCCA, AIA, LEED-AP and CSI Liaison to the U.S. Green Building Council. “Whether it is the requirements for a construction waste management plan or low VOC content for paints, coatings or adhesives, the CSI Certified professional intuitively knows how and where these requirements fit into the contract documents. In addition, they are well-suited to orchestrate the process necessary to submit for LEED Certification at the completion of the project's construction.”

Does green really cost more?

SmartMarket points out that the USGBC and AIA are not the only groups involved in promoting green building efforts, though they enjoy the highest market penetration and public profile in relation to commercial green building. Other groups include the Sustainable Buildings Industry Council, Green Building Initiative, National Association of Home Builders, Southface Energy Institute, Energy & Environmental Building Association, New Buildings Institute, Inc. as well as a multitude of other groups. It acknowledges that through these efforts, green building has remained at the forefront of the construction industry and has gained momentum to change construction practices.

More than half the architects surveyed expressed a strong preference for an independent third party to provide green building information and for a green products standard. At present there are a number of bodies, including manufacturer associations, which offer green certifications. One of the newest that will garner considerable respect is McDonough Braungart Design Chemistry (MBDC)’s Cradle to Cradle Certification, which recently announced the first products to qualify under rigorous examination that met stringent environmental and human health standards.

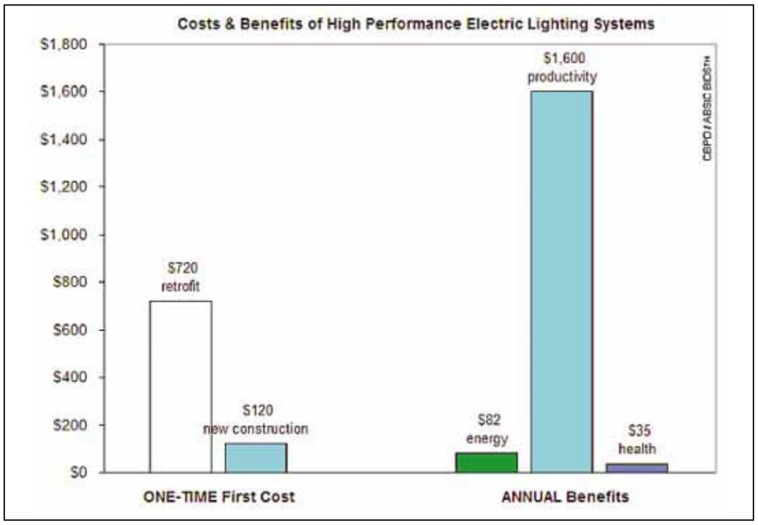

Figure 1, Source: Carnegie Mellon Center for Building Performance 2005

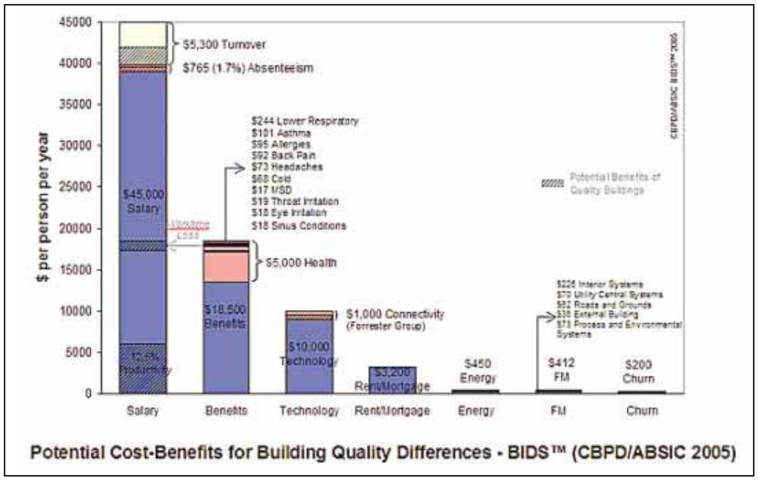

Figure 2, Source: Carnegie Mellon Center for Building Performance 2005

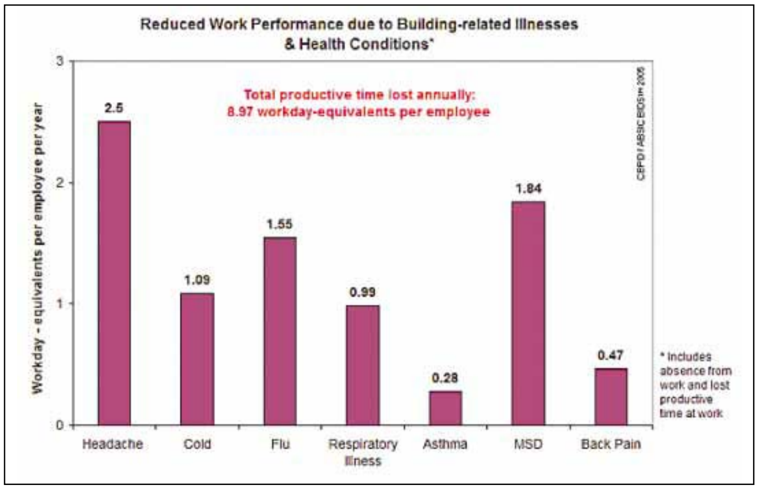

Figure 3, Source: Carnegie Mellon Center for Building Performance 2005

One of the salient issues covered in the survey concerns perceptions regarding the costs of green, which are not supported by research. *SmartMarket* found that all sectors of the AEC community cited higher first costs as the paramount obstacle to green building. Yet nearly all literature, from organizations ranging from the USGBC to the U.S. Department of Energy’s Building Technology Program, highlights the cost-effectiveness of green building. Most literature suggests green building can be achieved for comparable costs to standard construction, with better up-front planning and/or energy or other cost savings as a result of green construction.(See sidebar for lists of research groups and research papers)

Productivity gains, though far more difficult to quantify than energy savings, have substantially larger payback potential and may be the key to more widespread adoption of green building. Though energy expenditures are the largest operating expense, the Building Owners and Managers Association (BOMA) and the Electric Power Research Institute state that office workers’ salaries are 83.4 percent of total annual commercial expenditure whereas energy, electricity and repair and maintenance together amount to only 3 percent. But despite the need for research on productivity, the report states, payback data is scarce with few major studies quantifying green building performance. Among those who are actively studying productivity are the Carnegie Mellon University Center for Building Performance and Diagnostics and the University of California, Berkeley Center for the Built Environment. ■

CLICK FOR ADDITIONAL REQUIRED READING

The article continues online at: http://archrecord.construction.com/resources/conteduc/archives/0511greenmarket-1.asp

To receive AIA/CES credit, you are required to read this additional text. For a faxed copy of the material, contact Marissa Wyss at *Architectural Record*, (212) 904-2838 or e-mail marissa_wyss@mcgraw-hill.com The following quiz questions include information from this material.

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LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Have an increased understanding of the expanding green market and its different sectors.*
- *Find sources of research findings on building energy conservation, productivity and efficiency.*
- *Appreciate the importance of informed selection and specification of green products and materials.*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self-report form on page 257. Follow the reporting instructions, answer the test questions, and submit the form. Or use the Continuing Education self-report form on *Record's* web site—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. The major obstacle to green building is perceived to be___
   a. Not enough genuine green products and materials
   b. Lack of governmental interest
   c. Higher operating costs
   d. Higher first costs

2. Which groups have the highest public profile in the promotion of green building efforts.
   a. National Association of Home Builders and Green Building Initiative
   b. USGBC and AIA
   c. New Buildings Institute and Southface Energy Institute
   d. Sustainable Buildings Industry Council and Energy & Environmental Building Association

3. Green building market value by 2010 is projected to be_____
   a. Between $15.6 and $20.5 billion
   b. Between $10.2 and $20.5 billion
   c. Between $10.2 and $22.6 billion
   d. Between $12.5 and $20.5 billion

4. The top-ranked business reason for involvement in green building is____
   a. Higher return on investment
   b. Higher building values
   c. Lower operating costs
   d. Hoping to transform the market

5. Which component in a commercial building is the largest expense?
   a. Energy
   b. Employees
   c. Repairs and Maintenance
   d. Electricity

6. "Greenwashing" is___
   a. Obtaining green certification for products
   b. Being an activist in the green movement
   c. Making unfounded claims about products being environmentally beneficial
   d. Making financial contributions to green research

7. What is the percentage of LEED certified educational projects?
   a. 14%
   b. 15%
   c. 22%
   d. 18%

8. What percentage of architects, engineers and contractors are specifying and installing green products?
   a. 40 percent
   b. 75 percent
   c. 35 percent
   d. 60 percent

9. You must be a member to receive information from associations.
   a. New construction
   b. Residences
   c. Neighborhoods
   d. All of the above

10. The Green Guide for Health Care is __
   a. A list of green products
   b. A self-certification tool
   c. Incorporates health-based criteria
   d. b. and c. above

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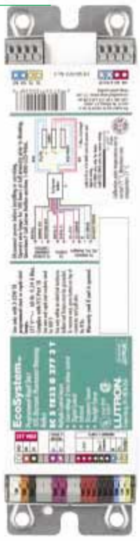

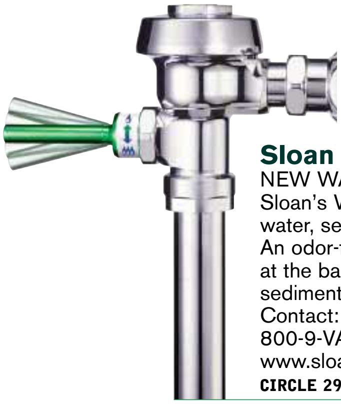

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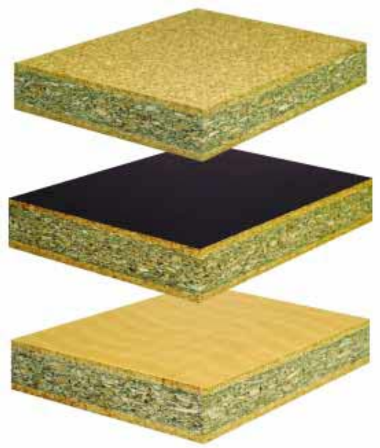

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Designing
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Lighting

A Chanel tower in Tokyo is well suited with an exterior sheath of sparkling LEDs

BRIEFS

Lighting designer Ingo Maurer has created a new Snowflake for New York City's holiday season. From November 28 through New Year's, the handcrafted object of stainless steel, crystal prisms, and light fixtures will shine as a "beacon of hope, peace, and compassion for vulnerable children around the world," in honor of UNICEF.

A tourist attraction for the 20th year, this edition of the world's largest outdoor crystal chandelier will grace the intersection of Fifth Avenue and 57th Street. Weighing more than 3,300 pounds with a diameter of 23 feet, the illuminated sculpture is 40 percent larger than last year's, designed to raise the visibility of the charitable organization. Maurer's team mounted **16,000 Baccarat crystals** onto a frame enhanced by 12 halogen-metal-halide spots and 300 blinking LEDs. Quincy Jones will light the Snowflake in ceremonies on November 28, followed by the second annual **Snowflake Ball** at the Waldorf-Astoria Hotel. For information on the event, contact www.unicefusa.org, or call 212/752-4770.

Lights shone brightly for charity as well on October 6, when Boston's Prudential Center was dynamically illuminated in a wash of pink and magenta. The one-night-only event, to spotlight **Breast Cancer Awareness**, was designed and staged by Steven Rosen of Available Light in Salem, Massachusetts, using Osram Sylvania theatrical fixtures manufactured by the company's display/optic division. The event was part of the Estée Lauder Company's campaign to support the Breast Cancer Research Foundation; go to www.bcrfcure.org.

It took 18 months, $545,000 in private donations, and negotiations among seven public entities, but the Stone Arch Bridge spanning the Mississippi River in Minneapolis was illuminated on October 17. Mayor R.T. Rybak flipped the switch on the project, part of a larger effort to revitalize the city's riverfront. **The 122-year-old Stone Arch Bridge** is the only stone bridge over the Mississippi River, and spans its only waterfall. Minneapolis architects Meyer, Scherer & Rockcastle (MS&R) enhanced the bridge on a pro bono basis, led by designer Carla Gallina. Warm yellow **high-pressure sodium fixtures highlight the limestone bridge.** Two lights attached to the underside of each arch produce an even wash of light on the structure and the water below. A photocell allows riverboat captains to switch off the bridge lighting if it interferes with navigation. MS&R has long supported riverfront enhancement; it also designed the Mill City Museum [RECORD, February 2004, page 122]. *W.W.*

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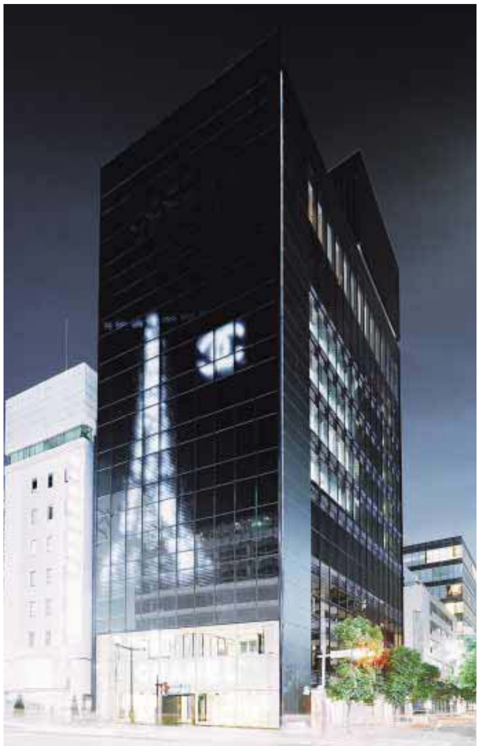
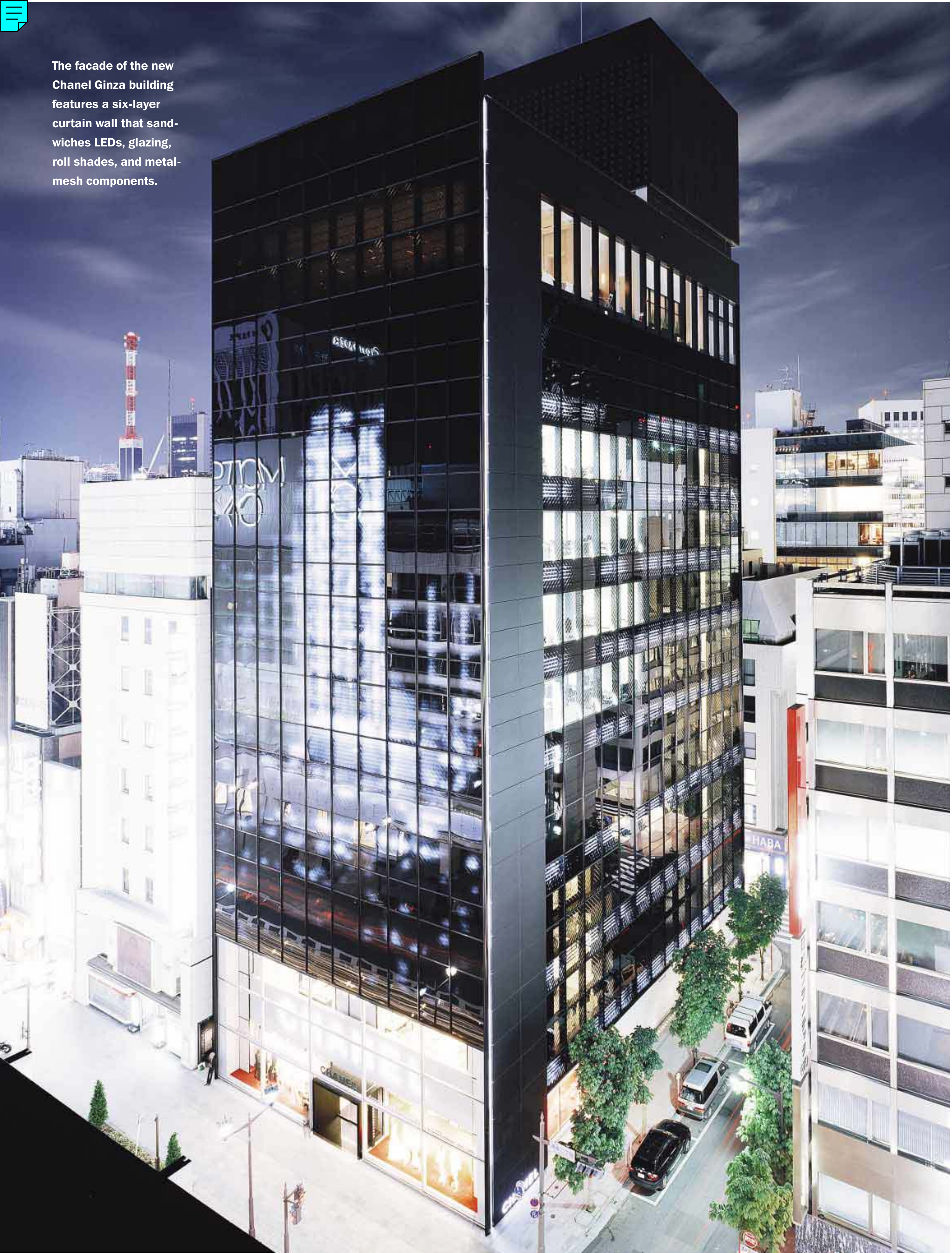


PHOTOGRAPHY: © SATOSHI MINAKAWA

Until recently, architectural lighting was often a value-engineered line item in construction; when budgets were squeezed, many owners and developers adopted the attitude, "We can always go back and add more lights." Happily, that's not usually the case today, with the integration of architectural structure and illumination advancing to new heights. At the new Chanel Ginza building in Tokyo (above), for example, architect Peter Marino teamed with consultants to place an immense LED system into the framework of the curtain wall. Aiding Chanel brand identity outside while enhancing the visual environment within, the tower's design creates a chameleon that's constantly changing its skin.

This month we also introduce two innovators who approach lighting design with artful imagination: Paul Cocksedge in London and Stephen Hennessy in Melbourne. Discover them as fixtures of illuminating creativity on the lighting scene. *William Weathersby, Jr.*



The facade of the new Chanel Ginza building features a six-layer curtain wall that sandwiches LEDs, glazing, roll shades, and metal-mesh components.

Peter Marino wraps **Chanel Ginza** in Tokyo with a cloak of light inspired by one of Coco's woven tweeds

By William Weathersby, Jr.

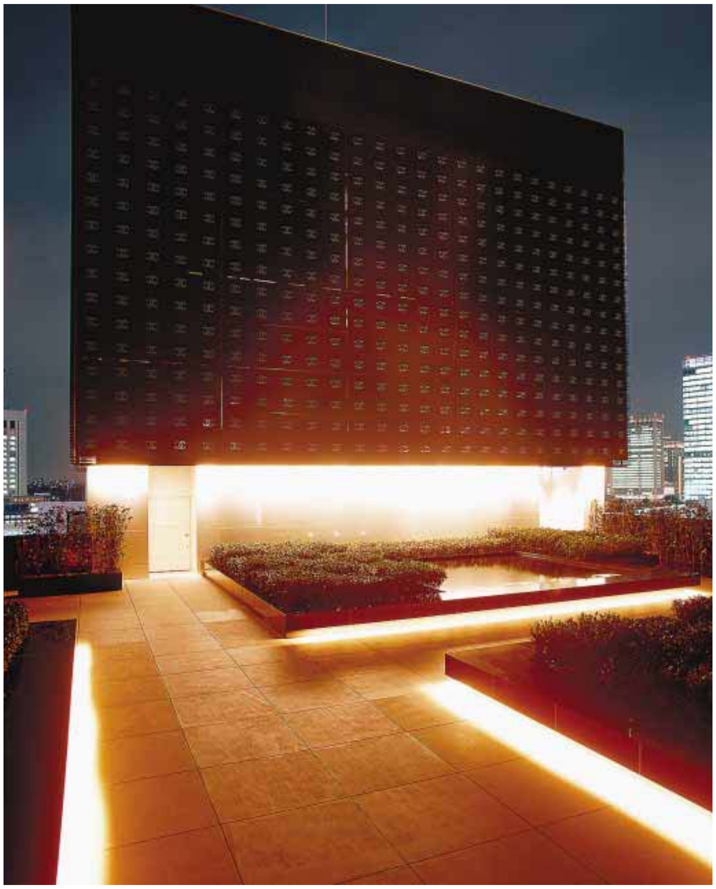
Fashion is architecture: It is a matter of proportions," Coco Chanel once said. The legendary designer known as a 20th-century trailblazer of style was also acknowledged as an innovator because of the careful construction of her seemingly simple suits. So why should the construction of a new flagship Tokyo store for the contemporary house of Chanel be any different? With a six-layer, integrated curtain-wall system fitted onto a reinforced-concrete core, New York–based Peter Marino + Associates Architects has created a chameleonlike structure cloaked in shimmering light.

"Functioning as a 21st-century branding billboard, the building is a conceptual rendering of a classic Chanel tweed," says principal architect Peter Marino. The design team's primary objective was to create a contemporary, iconic architectural expression of the Chanel ethos. At 215 feet, the building is the tallest in the upscale Ginza shopping district. The 10-story building comprises a three-level Chanel retail boutique, a fourth-floor exhibition and concert space, rental offices on the upper floors, a gourmet restaurant on the penthouse level, and a multifunction rooftop garden terrace.

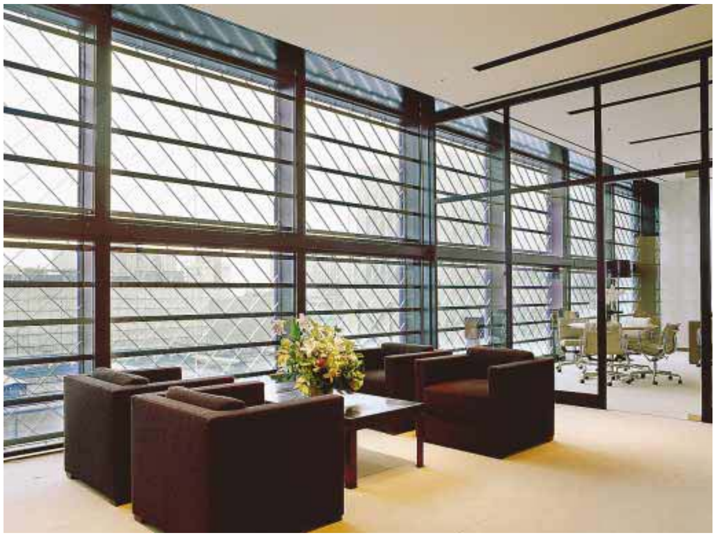
Working with fabricators in Germany, Japan, and California, Marino's team set out to create an ambitious melding of lighting and infrastructure. With lighting elements combined with steel mesh and sandwiched between layers of glass, the Chanel tower advances the architectural integration of LED technology into a curtain wall. "The lighting is not applied but instead is a key component of the facade itself," says Marino project associate in charge Darren Nolan.

Marino has a long history of creating signature flagships for Chanel in the U.S., London, and Japan—with another building now on the boards for Hong Kong set to debut this winter. Each store has presented its own technological challenge. Here, along the elite Chuo-dori Avenue, "the site was surrounded by other buildings with video projections covering their facades, but we wanted to create a more subtle, imaginative way to play with light and transparency," Marino says.

Kevin Furry, project manager of LED Effects, a lighting designer and fabricator that teamed with SGF to execute Marino's vision, explains that the curtain wall is a sophisticated 2-foot-thick layering of six components. From the facade working inward, the layers consist of an outside layer of glazing, with each panel either frosted or clear, determined by individual computer controls; a stainless-steel, diamond-mesh layer; UV-control glazing; LEDs fitted within horozontal tubes; a channel for computer-controlled roll blinds; and finally, an inner layer of protec-

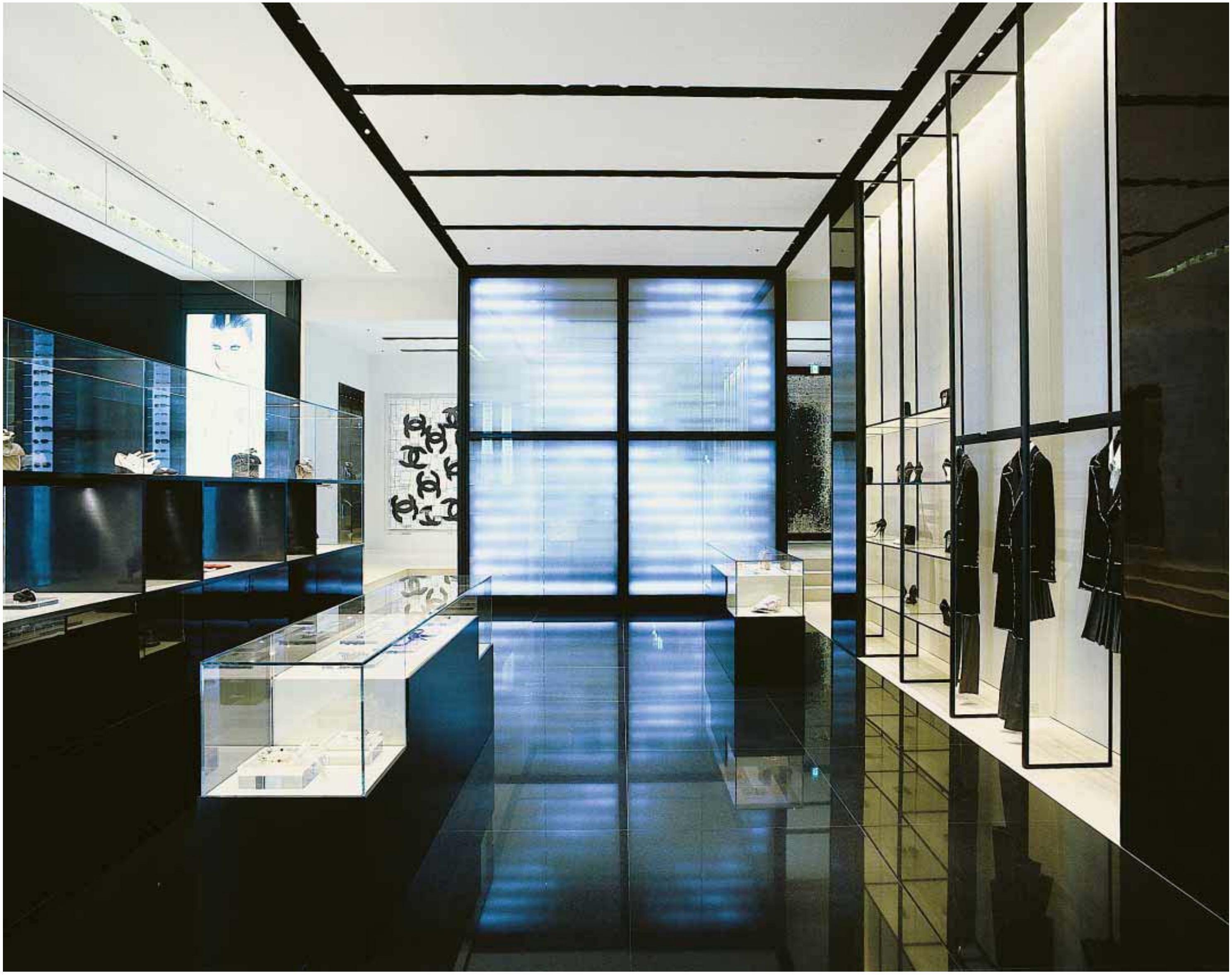


On the rooftop terrace (above), white cold-cathode light outlines planters, benches, and a feature wall. The curtain-wall assemblage (below) appears sculptural during the day.



Project: *Chanel Ginza, Tokyo*
Architect, interior designer, and lighting concept: *Peter Marino + Associates Architects—Peter Marino, principal; Darren Nolan, associate in charge; Osamu Mochizuki, Lee Harris, Yuuki Kitada, project team*
Exterior lighting consultants: *SGF—Yasuki Hashimoto, in partnership with LED Effects—Kevin Furry*
Interior lighting: *Worktecht; L'Observatoire*

PHOTOGRAPHY: © VINCENT KNAPP, EXCEPT AS NOTED; SATOSHI MINAKAWA (OPPOSITE)



A two-story feature wall (above and right) encases linear runs of LEDs that change throughout the day to create tweedlike patterns, in keeping with the theme of the facade. Halogens illuminate the clothing.

PHOTOGRAPHY: © PAUL WARCHOL (BOTTOM)

tive glass that gives the retail interiors an uninterrupted wall plane.

From inside and outside, the LED technology appears transparent, allowing office workers a clear and unobstructed view of the city during the day. Viewed from the street, the building appears as an immense black-and-white video wall at night. Imagery shifts from iconic Chanel designs, recent fashion shows, and current store promotions.

The glass facade lights up Ginza each dusk to dawn with 700,000 embedded LEDs. The system consists of more than 6 kilometers (3.7 miles) of control cables, 5 floors of industrial control closets, 3 master control computers, and 65,000 microcomputers processing more than 32 trillion instructions per second.

Coco Chanel also once opined that, like art, "an interior is the natural projection of the soul," and the retail interiors here don't disappoint as shopping zones. The size and location of the store allows Chanel to present its entire worldwide collection, primarily designed by Karl Lagerfeld. The ground floor makes a strong audiovisual statement with a two-floor-high LED feature wall that mimics the appearance of the facade. Floors are a combination of black granite and Portuguese lime-

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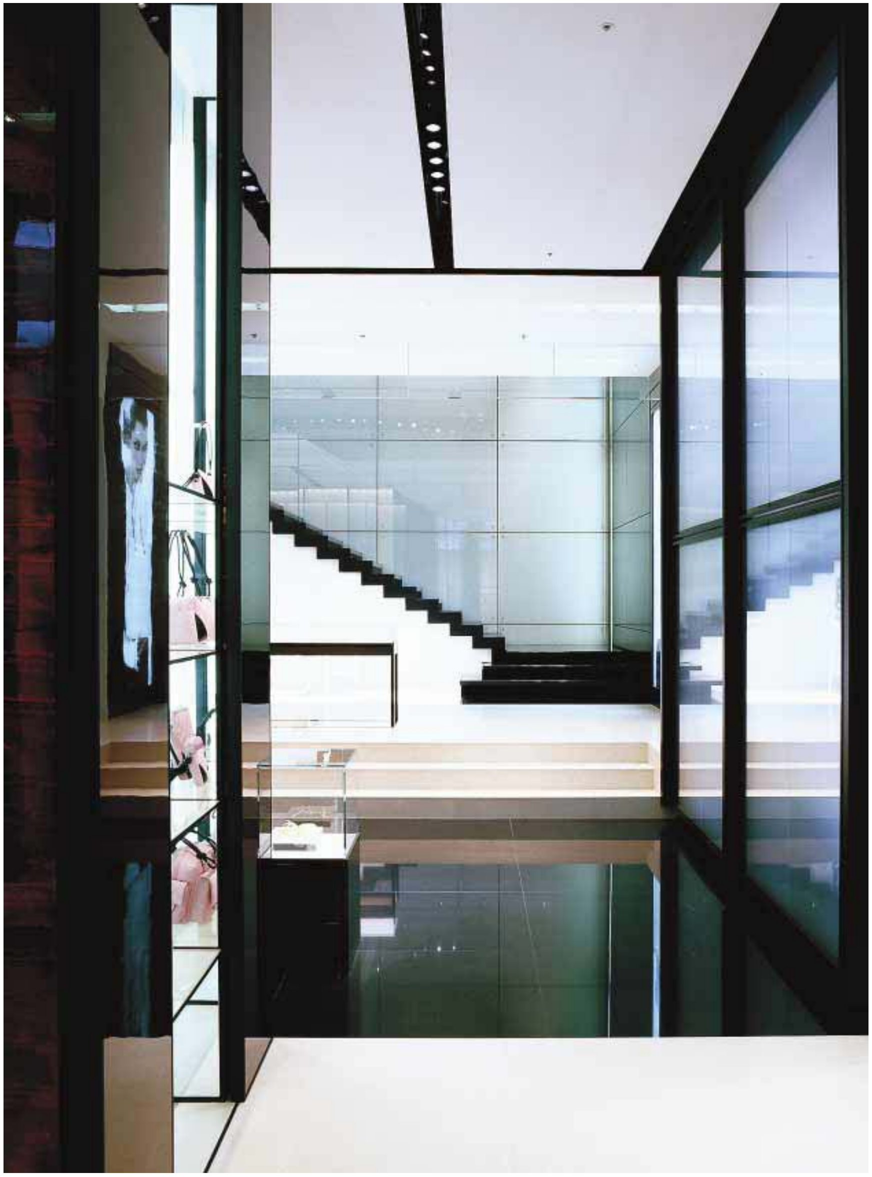
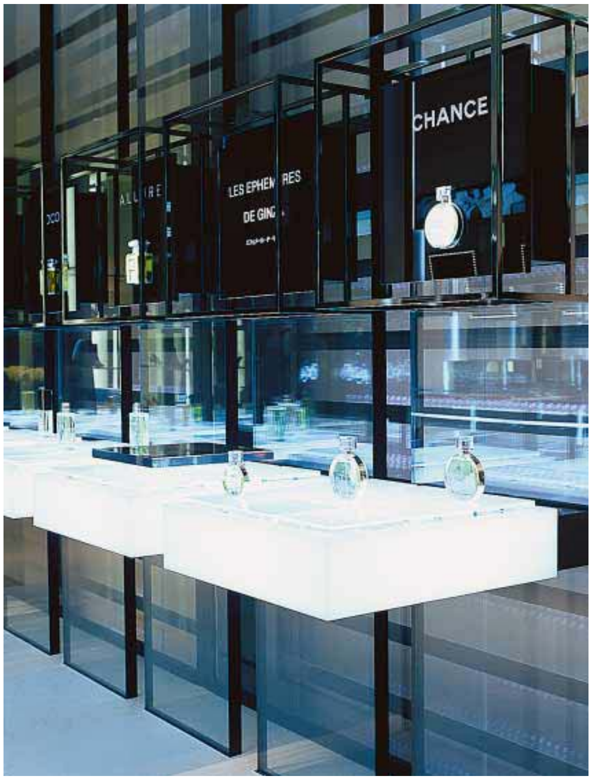




stone with varying levels of textured veining and sand drift. Accessories and handbags anchor the entry-level floor. A floating black-granite stair ascends four stories before a wall of glass-covered, woven white fiberglass.

As one progresses upward, the materials and color palette evolve as the products become richer and more luxurious, through the shoe department, ready-to-wear areas featuring sliding panels of black diamond-dust lacquer and textured ivory plaster, and culminating in the evening-wear and V.I.P. areas, where handcrafted gold tweed patterns adorn the walls. The lighting combines an array of custom halogen and metal-halide fixtures set into discreet ceiling channels or behind soffits. Each floor also showcases exhibitions of works by contemporary international artists.

The restaurant Beige, operated by top chef Alain Ducasse, transfers classic Chanel motifs to a modern haute-cuisine setting. Sparkling metal mesh welcomes guests into a gentle antechamber lounge. In the main dining area, the dramatic Tokyo views are visible through the woven stainless-steel "tweed" facade, with soft, unobtrusive lighting grazing horizontal and vertical planes. With subtlety and sophistication, the high-tech illumination stitches all the elements together. And the seams don't show. ■

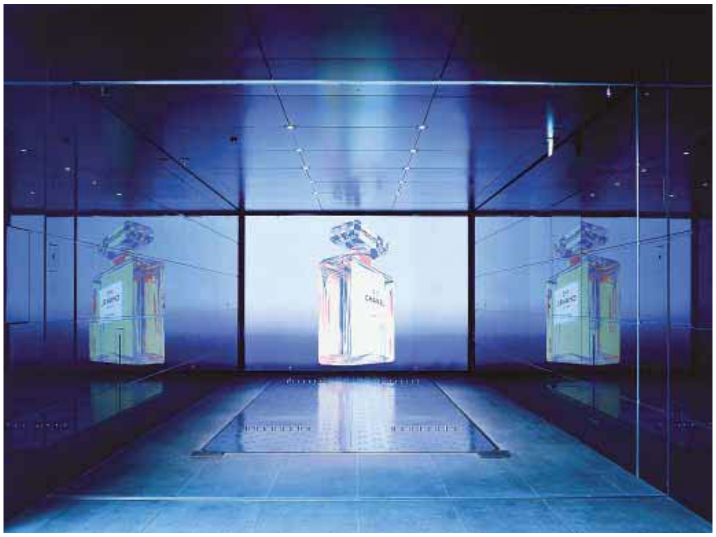
Sources

Curtain-wall glass panels, fabrication: *Eckelt Glas GmbH; Josef Gartner GmbH*

Custom LEDs: *LED Effects*

For more information on this project, go to Lighting at **www.archrecord.com**.

Halogen downlights are inset into black troughs to mimic the black lines of mullions and wall panels (above left). Cantilevered glass blocks are internally lit to showcase perfume bottles (above right). The garage entry (below) seems more like a sleek vitrine.



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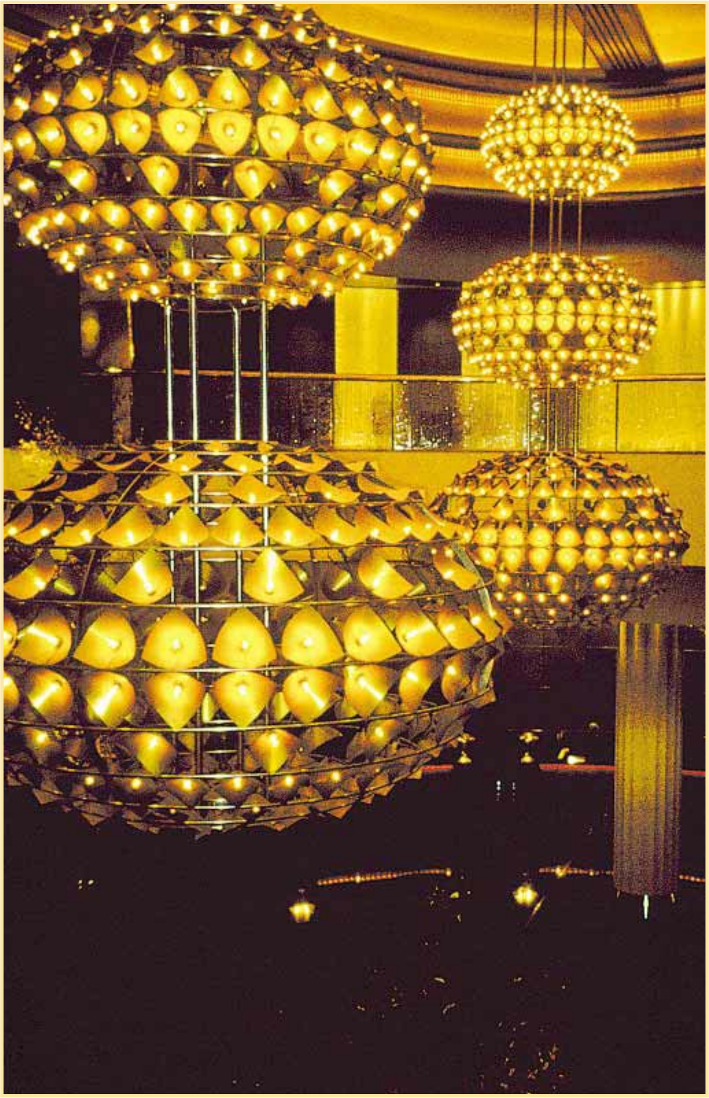
Nuances in the quality of light inspire sculptural lamps designed by Australia's **Stephen Hennessy**

By Robert Such



Artist Stephen Hennessy (top right) also designs lighting, such as the chandeliers for Melbourne's Crown Casino (above).

For almost two decades, visual artist Stephen Hennessy has fashioned spectacular custom light fittings for civic, commercial, and residential interiors from his home base in Melbourne, Australia. Ranging from freestanding sculptural works to monumental chandeliers of technical ingenuity, Hennessy's fixtures grace the walls, floors, and ceilings of some of Melbourne's most prominent buildings, such as the Museum of Immigration and Hellenic Archaeology, the Shrine of Remembrance, and the Port Melbourne Public Library. Other works shine in Adelaide and Sydney.

Hennessy moved into the field of lighting design in the late 1980s, when he became acquainted with the architect Allan Powell. With a commission to create a mural for Powell's Caffé Maximus already in hand, Hennessy offered to design two large lamps for the café himself when asked by the architect if he could recommend a lighting designer.

Over the years, Hennessy's lamps have blossomed in scale. He recently completed a 33-foot-wide circular chandelier—his largest one to date—for the Adelaide Casino. Part of a group of five, and only 16 inches deep, it "looks like a jet engine port," he says.

His earliest works were far from monumental in size. Taking his cue from Brancusi's figurative sculptures and from Cycladic art, Hennessy's first lamps resembled primitive wooden masks. The curved birch-ply forms hung away from the wall, their sinuous edges casting shadowy patterns around the light fixture. Since then, he has repeatedly reworked this idea of patternmaking with light and shadow.

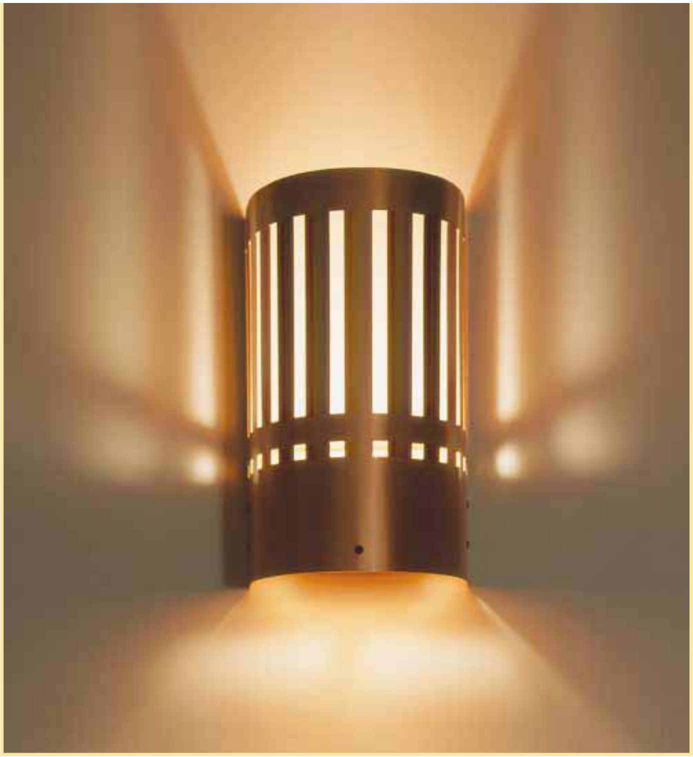
At the start of each project, Hennessy receives a broad-brush-stroke idea about the design from the architects. He then proceeds to search for "one or two discoveries about the interaction of light and materials." This part of the creative process bears a similarity to the search for a "principal design component," as adopted by the Italian architect and designer Achille Castiglioni, whose influential work Hennessy admires.

After visiting a proposed site, he begins making drawings and models. "I tend to make many small and large-scale models," Hennessy says, "in everything from cardboard to aluminum, to see how it works as a sculptural object. At the same time, I conduct light-level tests." When added precision is required, he turns to computer design software for help. The outcome of the process often yields lighting quite different from what the collaborative architects expected.

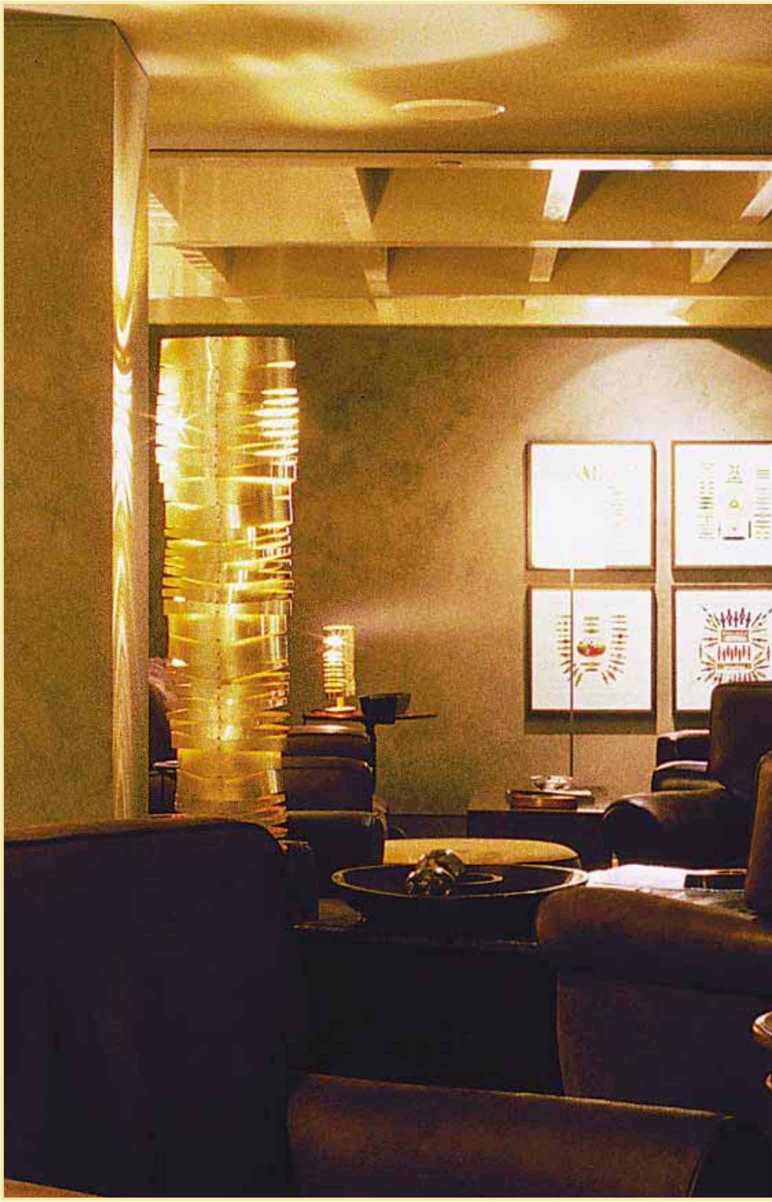
When the interior calls for it, his work can be sleek, modern, and boxy. Functional and built from matte anodized aluminum, the Heat Lamp was designed for the Docklands Stadium Medallion Club Restaurant. Meanwhile, formal Minimalism recurs in his design for the

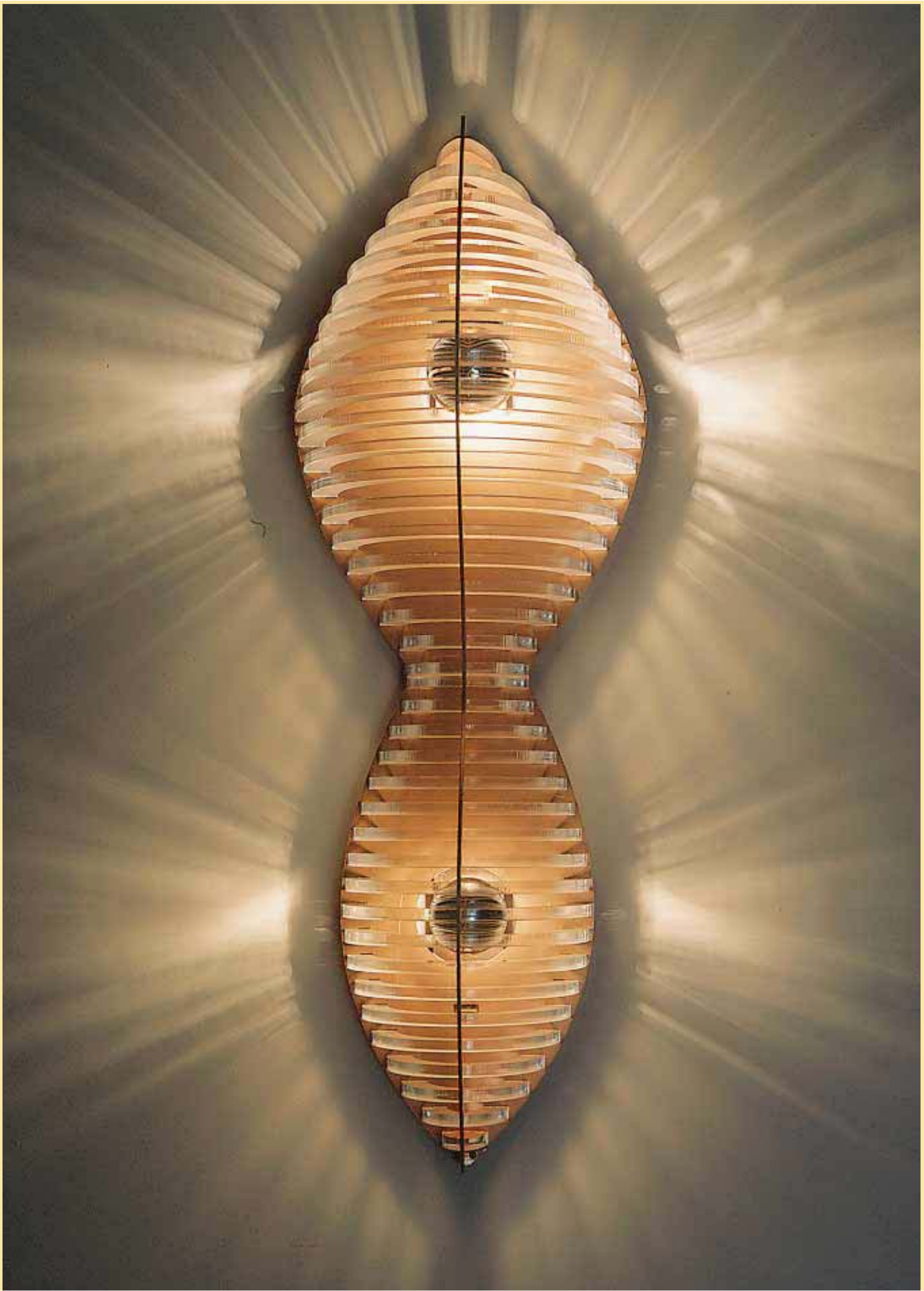
Robert Such is a writer and photographer based in Stoke-on-Trent, England. He frequently writes about international architecture and lighting design.

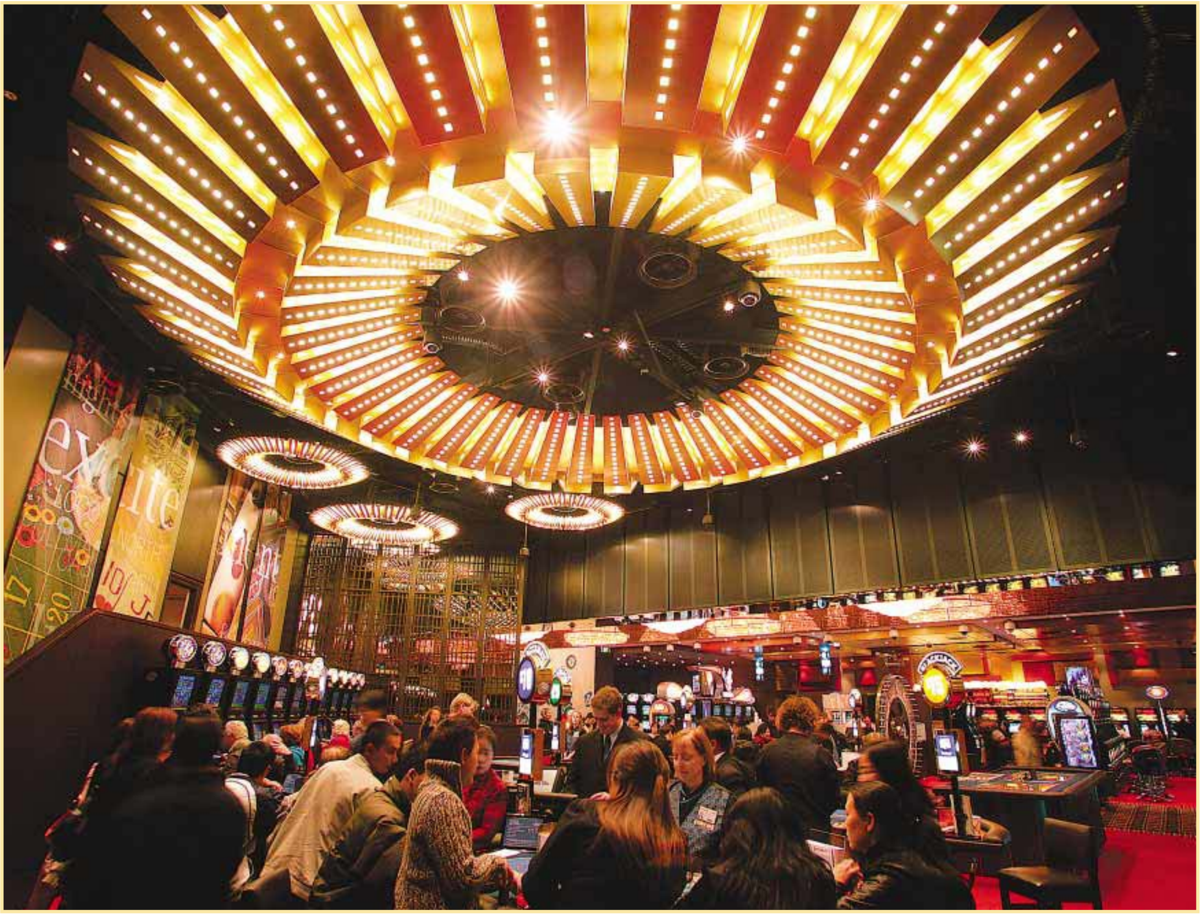
PHOTOGRAPHY: © ANTONY VISSER (RIGHT); STEPHEN HENNESSY (LEFT); EARL CARTER (OPPOSITE, RIGHT); RICK ALLEN (OPPOSITE, LEFT TWO)



The designer experiments with forms often inspired by nature or primitive culture. An amorphous floor lamp graces Fidel's Cigar Club (below). The Bove (left) and Joe Joe sconces (below left) seem masklike.







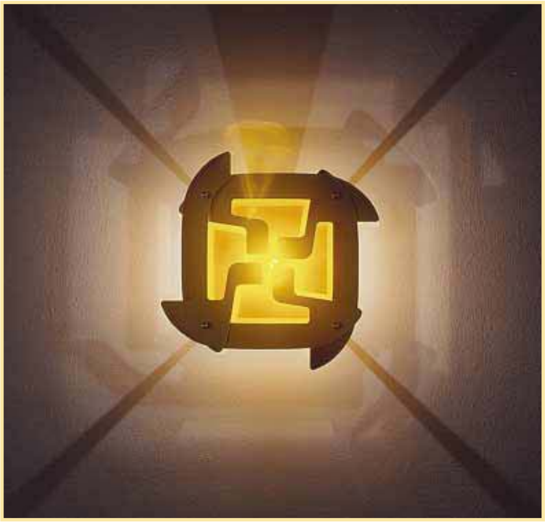
The 33-foot-wide scale of the chandeliers for the Adelaide Casino (left) are Hennessy's largest fixtures. On a smaller scale, he plays with shadow, light, and form with the Figo (below) and Winghead (bottom) fixtures.

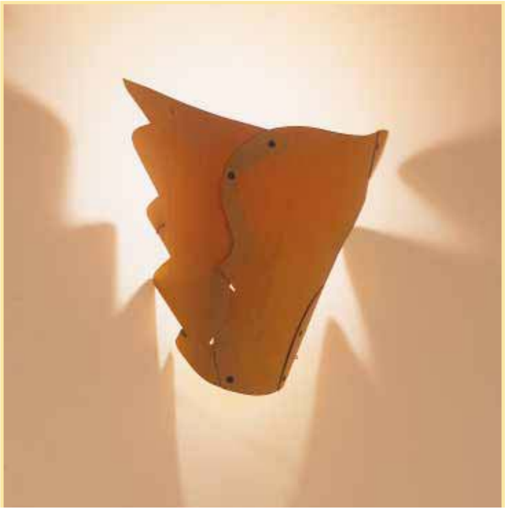
laminated glass-and-steel chandeliers that hang in the beige, black, and cream contemporary interior of the Crown Promenade Hotel lobby.

Expressed through the use of cuts, slits, slots, and perforations in the component parts of his increasingly complex metal light fittings, Hennessy's artistic language continues to develop through his experiments with a palette of materials that includes acrylic, aluminum, and steel. The materials may be folded, wrapped, and woven around the light source. To modify the quality of light, surfaces are sanded and brushed to create "shimmering and sparkling effects," says Hennessy. The ribbon of brass that he used to make the lamps for Fidel's Cigar Club, for example, tapers downward "to create an exotic skin, a crazy couture," he says. "It is exotic without referencing a specific place, using the alluring play of light to direct attention to the object itself."

Unlike his mixed-media artworks, which deal with the complex issues of meaning, content, and form, Hennessy's lighting designs are intended to have more of a symbolic "life-giving" presence. "The design of objects comes down to a certain amount of function and a certain amount of beauty," he explains. "I've enjoyed delving into industrial design because it's fairly free from the heavier concerns of art."

The look of Hennessy's earliest work was guided by his interest in representational art, and his latest designs possess geometries that abstractly evoke images from the natural world. The three-tier chandeliers in the Crown Casino on Melbourne's South Bank bring to mind glowing sea urchins. Hennessy calls them "monstrous jewels." They lend the lobby and bar area a sense of grandeur. Hoisted into position eight years ago, the chandeliers were Hennessy's first large commercial undertaking. His designs have since become more ambitious, and he is not afraid to think big. But no matter how great the scale of the work, his illuminating craft still manages to complement rather than dominate a space. ■





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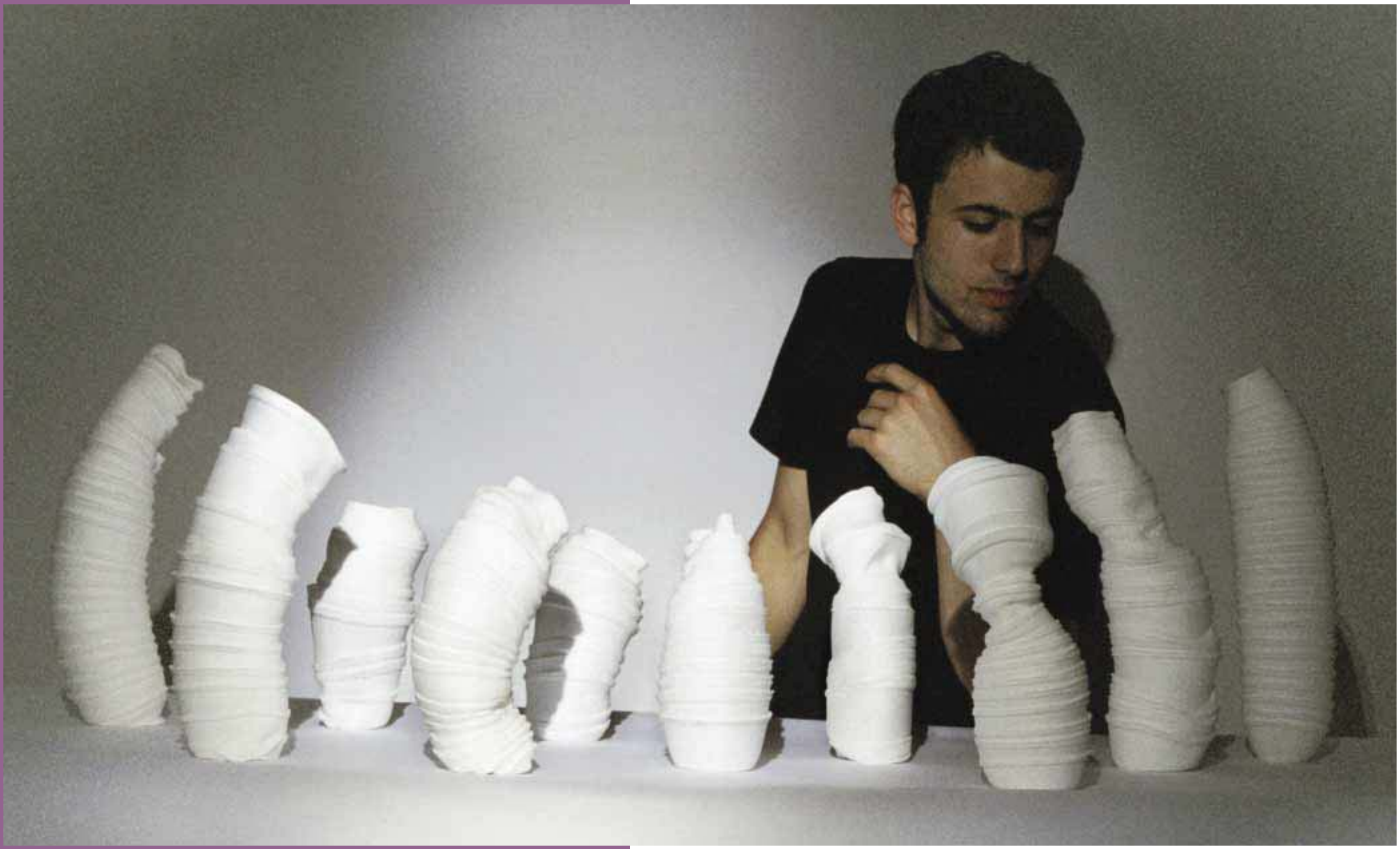
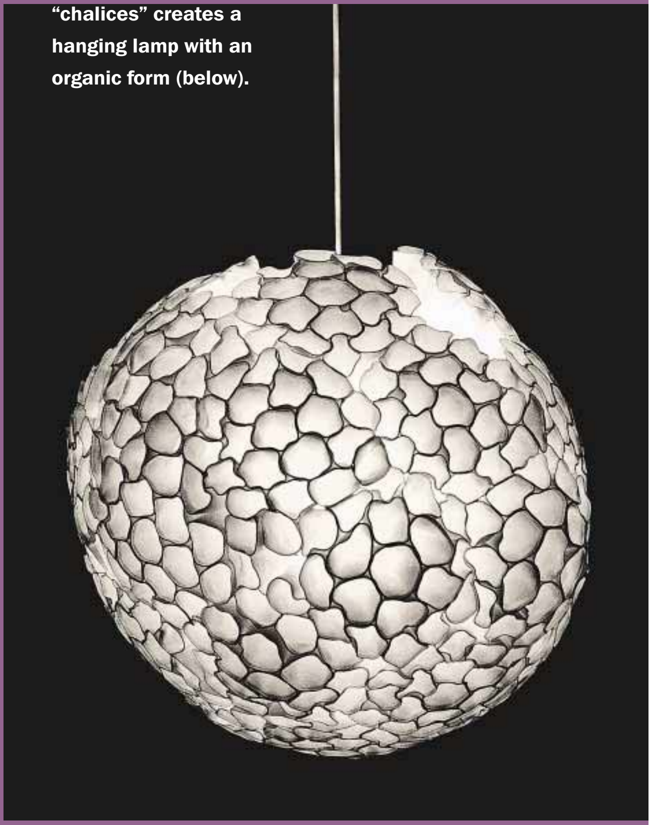


Lighting designer Paul Cocksedge (above) surveys a landscape of melted polystyrene cups. The same material bent into "chalices" creates a hanging lamp with an organic form (below).



PHOTOGRAPHY: © MARTIN LANGFIELD (TOP); JEAN-FRANCOIS CARLY (BOTTOM)

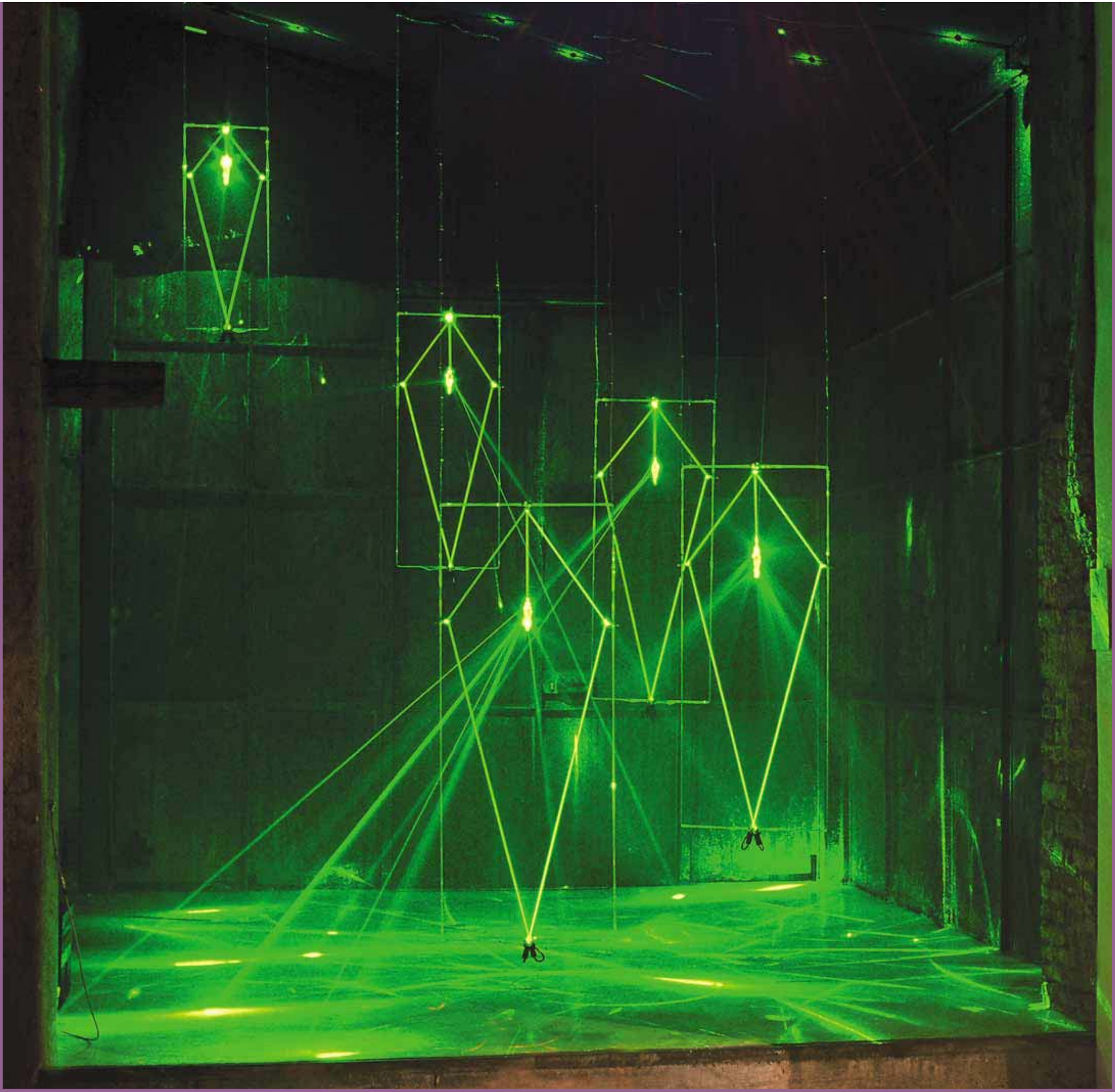
Fantastical lamps created by the young designer **Paul Cocksedge** make alchemy seem possible

By Robert Such

In business for just four years, Paul Cocksedge is one of the hottest young lighting designers in Great Britain, the well-lit "It Boy." Upscale clients such as the Bombay Sapphire Foundation and Swarovski jewelers commissioned him to design lamps, and last summer's *Touch Me* exhibition on tactile design at the Victoria & Albert Museum in London showcased his work. Cocksedge's pieces also are on display in that museum's Contemporary Glass Gallery. And last year he was short-listed for Designer of the Year in the U.K.

Since graduating in 2002 from the Royal College of Art, where he studied under mentor Ron Arad, Cocksedge's curiosity and need to scratch an intellectual itch have sparked explorations in the art and science of illumination. He researches a subject that interests him—perhaps glassblowing or the geometry possible to produce with lasers—then his findings inform a luminaire design concept. His fixtures transform the familiar into something engaging, while eliciting a measure of mystery.

Styrene, a lamp made from melted polystyrene cups, was one of



his early works. According to Cocksedge, he decided on a whim to place a polystyrene vending machine cup in the oven; he now concludes that he "must have seen it not as a cup but as a material." Any number of cups can be assembled to create the desired sculptural form, such as a pear, a water droplet, or an insect's honeycomb. Clients including Miami-based architect Rene Gonzalez and Swedish-born Martin Brudnizki have ordered site-specific Styrene lights for their commercial and residential interiors.

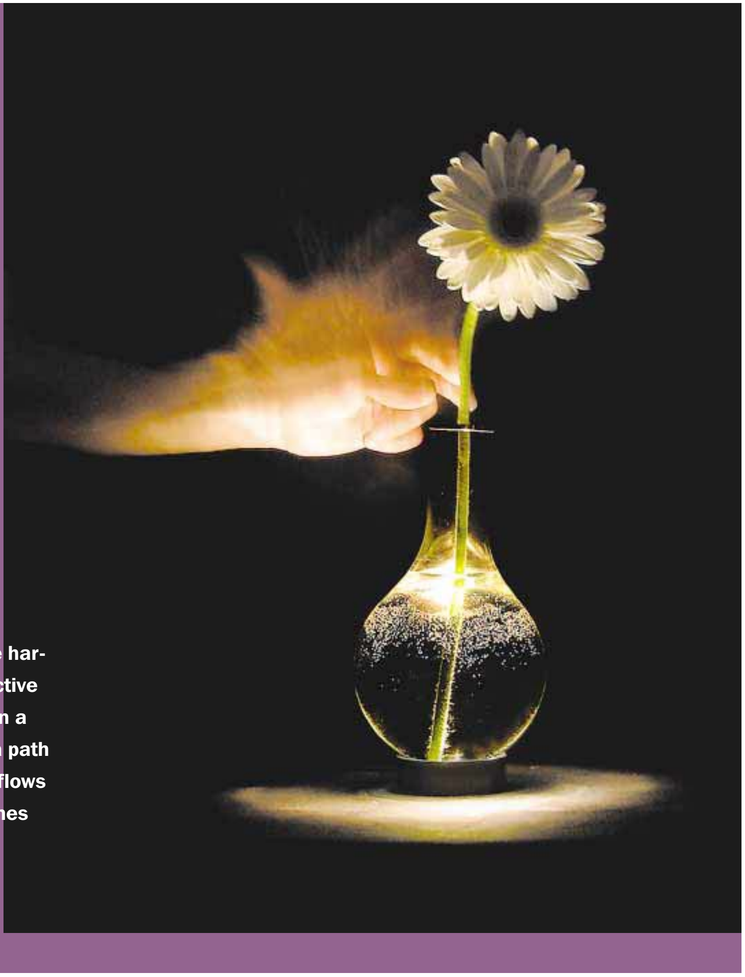
When Bombay Sapphire commissioned Cocksedge to design a blue lamp (the distiller uses blue glass as a part of its corporate identity), the 27-year-old designer cracked open a bottle and set to work.

"One of the good things about the project," he says, "is they sent over to the studio loads of free gin and tonic. So I poured myself a drink and walked around. I went outside and noticed that the color of the liquid changed ever so slightly." Figuring out that it was caused by ultraviolet light, he went out and purchased a blacklight. The more powerful UV light source made the drink glow an eerie blue, produced by quinine molecules in the tonic water fluorescing in the light.

To design a Bombay Sapphire light that could be manufactured and sold as a self-contained unit, Cocksedge mounted a miniature LED downlight in the top of each bulb-shaped glass vessel. When the lamp is switched off, the photochemical reaction stops and the potent-looking blue liquid returns to its transparent state.

A keen interest in natural phenomena and the conductive properties of natural materials has led Cocksedge to design other lamps. Switching them on is simple, but it's done in unusual ways. The Bulb luminaire, for example, makes use of the conductive properties of sap in

Cocksedge's Swarovski chandelier (opposite and detail, below) employs lasers to refract and reflect light off an array of jeweler's



The Bulb luminaire harnesses the conductive properties of sap in a flower. It creates a path for current, which flows through and switches on a halogen bulb.

a long-stemmed flower. It creates a path for current, which flows through the water in a vase and down the stem to switch on a halogen bulb.

The concept behind the Watt? lamp relies on the ability of graphite to conduct electricity. Clipped to the base of the lamp is a sheet of paper, printed with two lines that make an incomplete electrical circuit. Joining them with a pencil line completes the circuit and causes the light to come on. Erasing the line turns it off, and if a user draws a shape or creates a longer line, it produces more resistance in that line and it dims the bulb.

While remaining open to the idea of designing products other than lamps, Cocksedge for the moment is content to work with light. Now he is investigating the effects of other natural phenomena and the emotional impact of LEDs. "You've got a lot of things to combine with light," he says. "There are many opportunities to experiment." ■

PHOTOGRAPHY: © ANDREA FERRARI (OPPOSITE AND THIS PAGE, LEFT); RICHARD BRINE (TOP AND BOTTOM RIGHT)

Inside the NeON fixture, a single glass tube, a wire excites natural gas molecules to cast soft red light.

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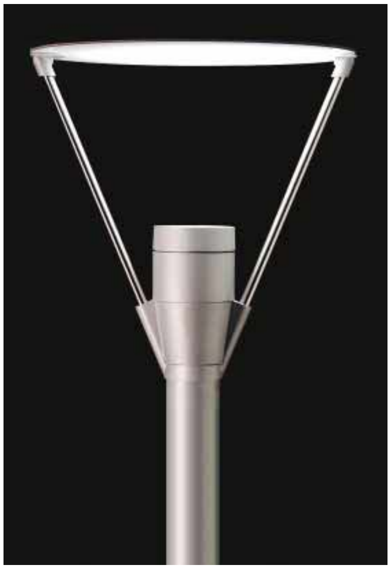
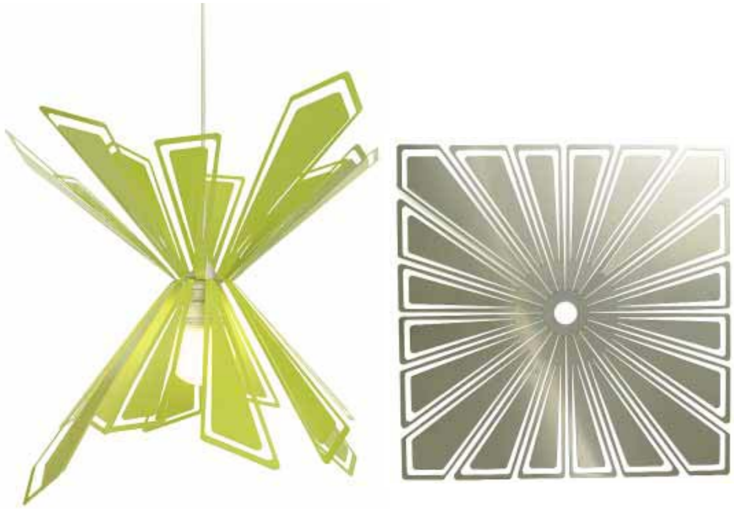
Lighting Products

► Dark sky sensitive

The Indirect series, from Architectural Area Lighting, features high-efficiency, cutoff optics designed for dark-sky-sensitive applications. Ideal for projects that require soft illumination, Indirect is available in two distinct head designs, a straight fixed head and an adjustable head. Indirect is available with a round or square reflector, designed to direct the illumination on the ground with no stray light. Both post- and wall-mount models are available. Architectural Area Lighting, La Mirada, Calif. www.aal.net

CIRCLE 200





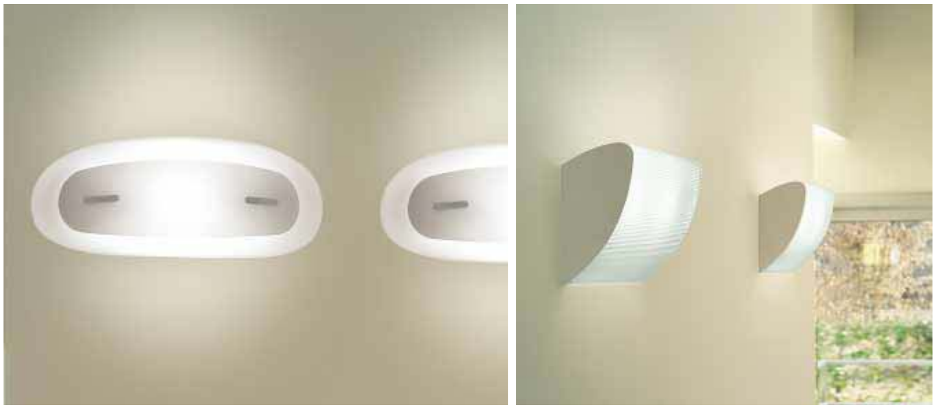
▲ Set your own mood lighting

The 2005 *Choose and Design* collection from MIO includes a new chair, 3D wallpaper, and lamp designed to allow the user to easily customize the final product. The Bendant Lamp, shown above unbent (left) and flat-packed (right) features leaflike powder-coated laser-cut steel shades that can be selectively bent to achieve a range of light and shadow compositions. The flexible lamp comes in a maximum length of 30", a maximum width of 33", and a maximum cord length of 180". Bendant is illuminated with a compact fluorescent 20-watt globe bulb. MIO, Philadelphia. www.mioculture.com **CIRCLE 201**

► Classy glass fixtures

The latest fixtures from Leucos USA include Danilo De Rossi's Fold (near right) and Ypse (far right) designs. Fold's play of reflected light is obtained by the shielding, available in a perforated chrome version or in white, red, blue, or yellow satin glass. Fold is constructed of curved satin glass with a chrome frame and varnished titanium, and is available in suspension, ceiling, and wall versions. The Ypse wall sconce features a semi-elliptical design that is adaptable to residential and commercial environments. The ADA-compliant fixture is available in three different dimensions and in a satin-white or ribbed-glass finish. Leucos USA, Edison, N.J. www.leucosusa.com

CIRCLE 202



▲► Knuckles and silk

Boyd's new collection of fixtures come from a range of collaborating designers as well as the company's director of design Doyle Crosby. The Articulating Rail, a Crosby design for Boyd's Lightspace division, is an indirect lighting system based on a "knuckle" feature (top left) that connects the 1.85" extrusions. The "knuckle" allows the system to pivot 60 to 240 degrees, giving designers the freedom to create a multitude of configurations as well as use light to turn corners and create traffic paths. The London Pendant (right) by Barbara Barry was inspired by London's Savoy Hotel. A white linen shade, nestled inside an oversize black silk shade, hangs from a faceted tapered stem extending up to a large round stepped canopy. Boyd Lighting, San Francisco. ww.boydlighting.com **CIRCLE 203**

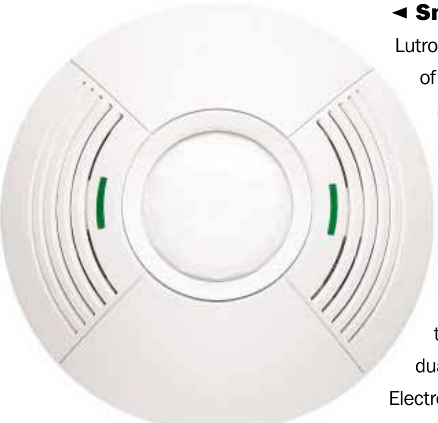
Lighting Products

▲ A better-looking view

Taiyo bollards from Forms+Surfaces feature an Asian-inspired design and two head styles: Garden (above) or Urban. All major components are made from rust-proof cast aluminum in a polyester powdercoat finish. The bollards are available in compact fluorescent and HID versions and may be specified with a standard base-plate mount or with a 5"-diameter embedded steel core for extra security. Also new from Forms+Surfaces is the Triada bollard that is designed for both traditional and contemporary environments. It is available in a larger pedestrian-height version. Forms+Surfaces, Carpinteria, Calif. www.forms-surfaces.com **CIRCLE 204**

▲ Penny-saving pendant

Energos is a linear pendant fluorescent lighting system designed to assure visual comfort with minimal energy consumption. The bi-directional fixtures are offered in two distinct housing styles, either a softly curved (above) or squared-edged profile. Both are available with a parabolic louver or a duplex lens, which supports three different optics and multiple lamping options. Energos offers more than 100 high-performance lamp and ballast configurations to achieve the ideal lighting without wasted power. Lightolier, Fall River, Mass. www.genlyte.com **CIRCLE 205**



◄ Smarter detectors

Lutron has announced three new lines of smart technology occupant sensors for commercial lighting projects. Lutron's new ceiling-mount (left), wall-mount, and wall-switch occupancy sensors feature self-adjusting technology that helps to prevent false-on and false-off conditions through the use of infrared, ultrasonic, and dual-technology detectors. Lutron Electronics, Coopersburg, Pa. www.lutron.com. **CIRCLE 206**

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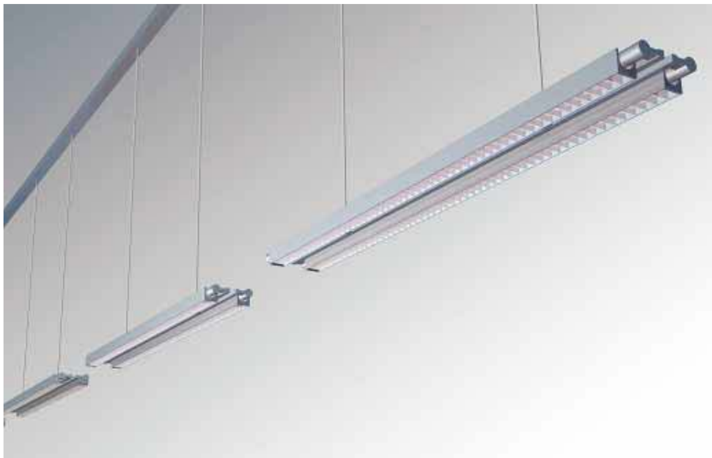
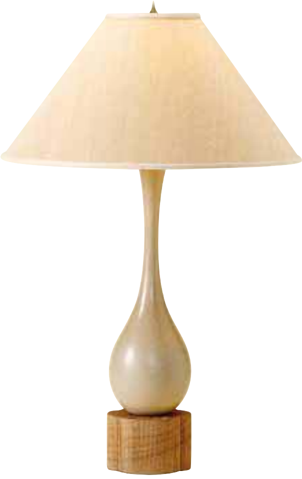
Lighting Products

▼ Swinging system

The Swing T5 linear fluorescent system is a new approach for providing linear T5 and T5HO illumination from ceilings, walls, and pendant cables while maintaining a scale appropriate for minimal architectural themes. Swing features a minute profile (1" wide x 2" high), and a ballast enclosure and ends of die-cast aluminum. Pendant fixtures are suspended with aircraft cable and are field adjustable to a maximum of 8' from the ballast. Inherent energy savings features within the electronic ballast make Swing compliant with all energy codes and suitable for projects applying for LEED certification. Delray Lighting, Burbank, Calif. www.delraylighting.com **CIRCLE 207**

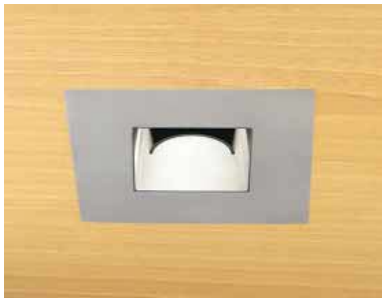




◄ Drop of tea

Hwang Bishop, a source for contract lighting and furnishings, offers a new collection by designer Felicia Hwang Bishop inspired by ancient forms, nature, and sea life. Hwang Bishop's Asian-influenced vessel forms include bamboo-, coral-, and shell-inspired pieces in finishes ranging from subtle to brilliant crackle glazes. The Téa lamp (left) features a dewdrop shaped body and sits on a clover-shaped wooden stand. It is shown here in an oyster finish with a hardback shade. Hwang Bishop, Warren, R.I. www.hwangbishop.com **CIRCLE 208**

► The invisible downlight



At Lightfair International 2005, Lucifer Lighting unveiled a range of new technologies, including metal-halide and compact fluorescent small-aperture downlight fixtures, and solid-state linear and Puklight-style fixtures illuminated by miniature LEDs. Almost invisible against the ceiling plane, the small-aperture, square-recessed downlight (above) features low-voltage MR-16 lamps and new 39-watt, energy-efficient ES16 metal-halide lamps. The fixture's lamp holder permits stacking of up to three lenses/louvers. Lucifer Lighting, San Antonio. **CIRCLE 209**

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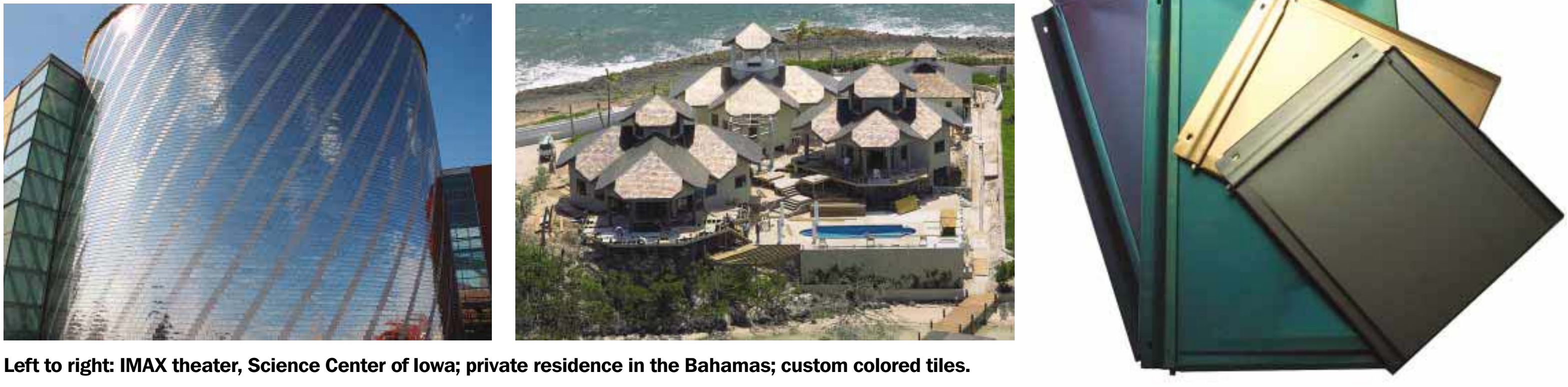
Products

Roofing & Siding

Whether made of stainless steel, asphalt, bark, or some other material, the **roofing and siding** products featured this month are challenged to simultaneously offer good looks, energy efficiency, **storm-resistance, and sustainability**, while keeping building occupants comfortable. *Rita Catinella Orrell*

Stainless-steel roofing and siding tiles in a rainbow of colors



Left to right: IMAX theater, Science Center of Iowa; private residence in the Bahamas; custom colored tiles.

Illinois-based Millennium Tiles claims to be the only manufacturer of stainless-steel roofing and wall tiles worldwide. Initially targeted for the residential market, the tiles can be used in commercial and institutional projects as curtain walls or as a "green" roof to collect potable water or cut down on air-conditioning needs. Competitively priced with high-grade cedar, slate, clay, or other metal-roofing products, the Dade County–approved tiles are made of approximately 75 percent recycled material and are 100 percent recyclable. A built-in "shadow cup" adds the dimension of a more traditional shingle while significantly reducing noise.

In addition to the traditional silver color of stainless steel, Millennium Tiles can be colored with a prismatic process that raises the chromium-oxide layer of the stainless. This process prismatically separates visible light into different wavelengths, resulting in different colors within the clear oxide surface. Since the oxide layer is clear, it is never subjected to UV deterioration, and the color will stay the same for the life of the steel. The only color change occurs in response to the light available during the day.

Currently, the tiles are produced in 9" x 15" or 7.75" x 9" sizes. In the next few months, Millennium will make the product in sheets as large as 48" x 120", which will allow for larger sizes to be fabricated. A complete accessory line of accent shingles and trim is available. Millennium Tiles, Barrington, Ill. www.millenniumtiles.com **CIRCLE 210**

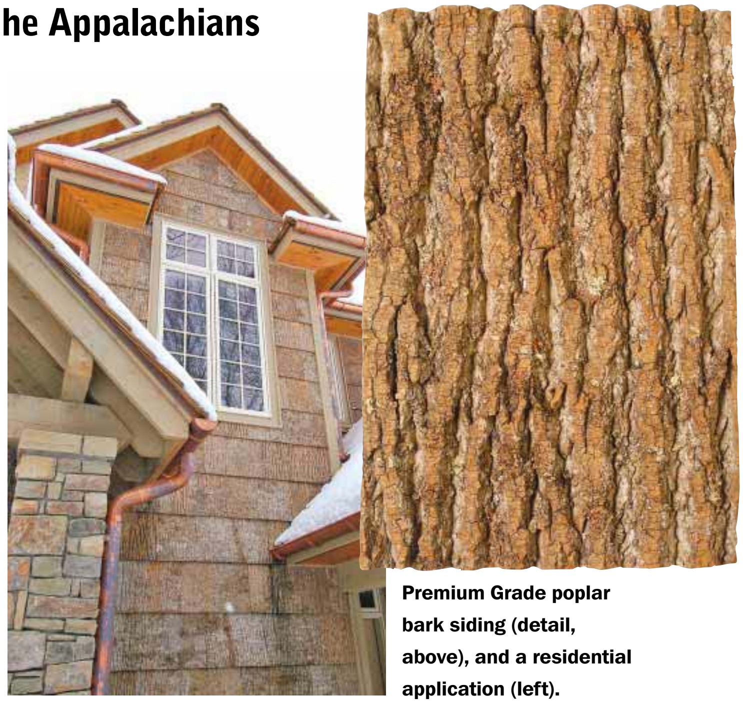
Handcrafted bark siding makes a comeback in the Appalachians

Once the staple cladding for summer retreats in the Appalachian Mountains, Chestnut Bark became unavailable after the chestnut blight of the 1940s. Today, Highland Craftsmen, a North Carolina–based manufacturer, is part of a "Bark House" revival, crafting shingles from more durable poplar bark.

Highland Craftsmen's bark siding is kiln-dried, which prevents shrinking and cracking once the bark shingles are applied to a structure. The bark contains no chemical additives, yet resists infestations and can meet stringent municipal building-code standards for flammability.

Using careful harvesting methods, the team loosens whole cylinders of bark from trees felled for other uses. The cylinders of bark are flattened and cut by hand into standard shingle length. After damaged or cracked sections are removed, the shingles are carefully stacked and then placed under pressure to prevent curling. The stacks are kiln-dried to the proper moisture content, sterilized, and stored in a climate-controlled warehouse until ready to use.

The company offers a full range of complementary products to enhance a bark-shingle home, including handrails, posts, mantel pieces, custom furniture, and bark panels and sheets for interior applications. Highland Craftsmen, Blowing Rock, N.C. www.barksiding.com **CIRCLE 211**



Premium Grade poplar bark siding (detail, above), and a residential application (left).

Products Roofing & Siding

◄ Fascia system for next Katrina

W.P. Hickman's new Safeguard NP (nonpenetrating) fascia system has been redesigned to meet even higher wind-resistance than the original Safeguard NP. This redesigned product comes with the company's Category 5 warranty, a 25-year, 155-mph wind-resistance guarantee. The exterior fascia system is available in extruded or formed aluminum and galvanized steel. W.P. Hickman Systems, Solon, Ohio. www.wphickman.com **CIRCLE 212**

► Insulated wall panels

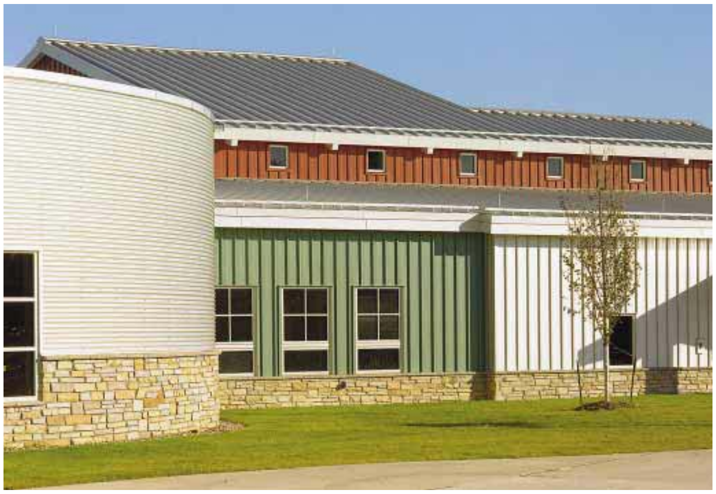
Insulated wall panels from American Buildings Company incorporate a finished interior liner, factory-applied air and vapor shield, insulated foam core, and finished exterior weathering surface into a single building unit. Available panel choices include Micro Rib, Plank (right), Shadow Wall, Premium Flat Light Embossed, and Heavy Stucco or Concrete Texture. American Buildings Company, Eufaula, Ala. www.americanbuildings.com **CIRCLE 214**

◄ Tougher skin

Norandex/Reynolds Distribution, an Owens Corning company, offers Polar Wall Plus exterior system, an insulated vinyl-siding panel that performs well in extreme weather conditions. The system lets the home breathe by allowing moisture to escape through the polystyrene foam, then exit the house through weep holes in the bottom of each siding panel. It offers up to 300 percent more impact-resistance than traditional nonreinforced panels. Owens Corning, Toledo. www.owenscorning.com **CIRCLE 215**

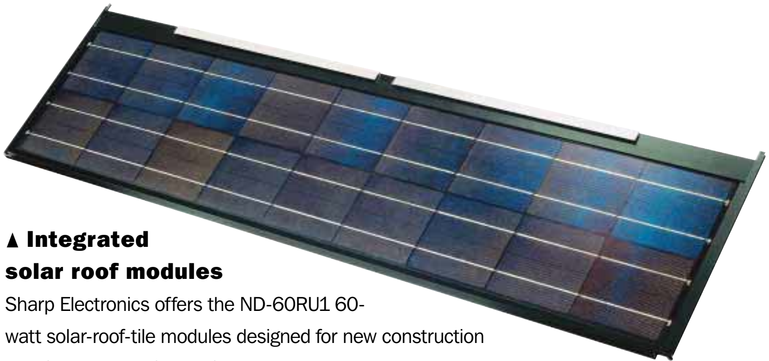
▼ Supporting member

Securock is a new roof cover board option from USG for low-slope commercial roofing applications. According to the manufacturer, the product's advanced fiber-reinforced technology provides superior performance benefits compared to traditional fiberglass roof boards, whose face layers can delaminate over time. The roof board is installed over the roof insulation and under the membrane, supplying protection, separation, and support for the membrane. USG, Chicago. www.usg.com/securock **CIRCLE 217**



▲ Rural school design

For the CountrySide Elementary School in Byron Center, Michigan, Centria provided metal wall and roof panels in a variety of profiles, gages, and finishes to help the architects create an agricultural-themed school complete with clapboard walls and a domed roof atop the media center to create the look of silos. The specified Centria products include Centria SRS 3 structural standing seam roof, Econolap and BR5-36 exposed fastener profile panels, IW-14A concealed fastener panels, and ADP 100 architectural standing seam roof panels. Centria, Moon Township, Pa. www.centria.com **CIRCLE 213**



▲ Integrated solar roof modules

Sharp Electronics offers the ND-60RU1 60-watt solar-roof-tile modules designed for new construction or refurbished roofs. The flat-panel modules interlock smoothly with standard roof tiles for a clean, smooth look. They are compatible with most shapes and sizes of roof tiles used in new residential construction, with one module replacing five standard concrete tiles. The panels feature a 25-year warranty on their power output. Sharp Electronics, Mahwah, N.J. www.sharpusa.com **CIRCLE 216**

▲ Cooler asphalt shingles

Elk has created the first colored asphalt shingle that meets the initial performance levels of the Energy Star program. The Cool Color Series shingles feature 3M Cool Roofing Granules and are available in a choice of earth-toned colors: Cool Weathered Wood, Cool Antique Slate, and Cool Barkwood (above). Prestique Color Cool Series shingles carry a 40-year limited warranty and up to a 90-mph limited wind warranty with a special application technique. Elk, Dallas. www.elkcorp.com **CIRCLE 218**

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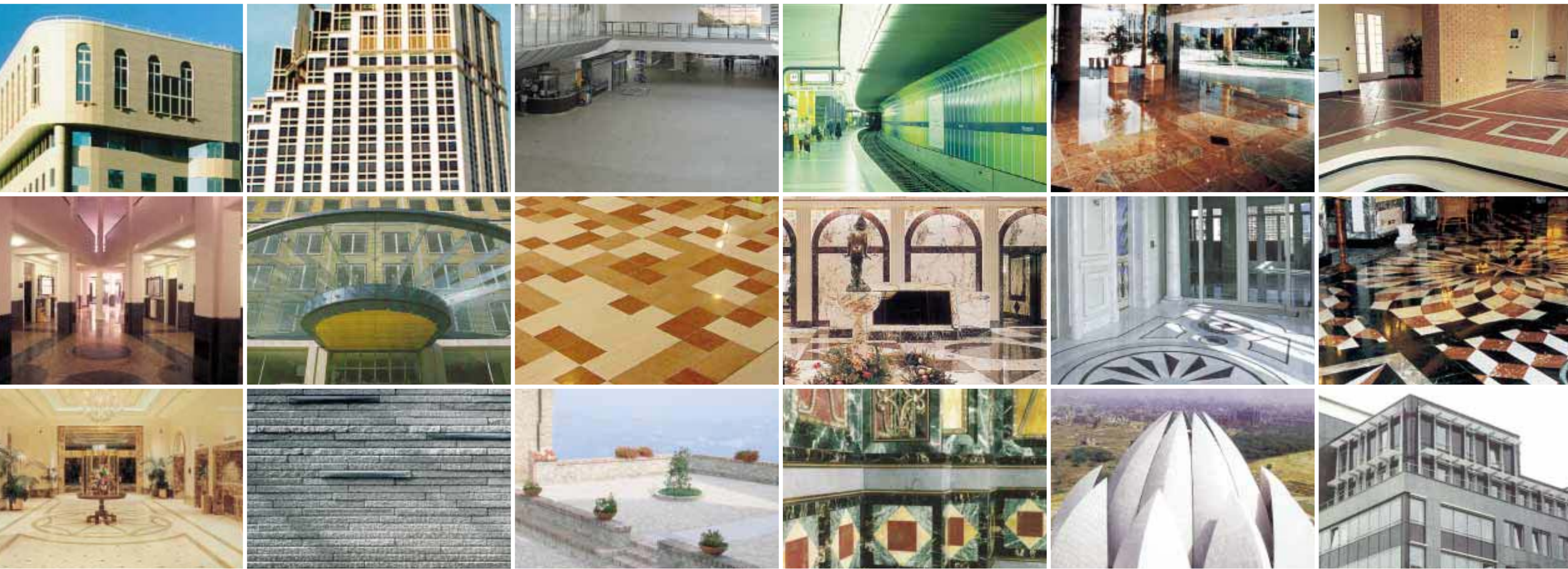
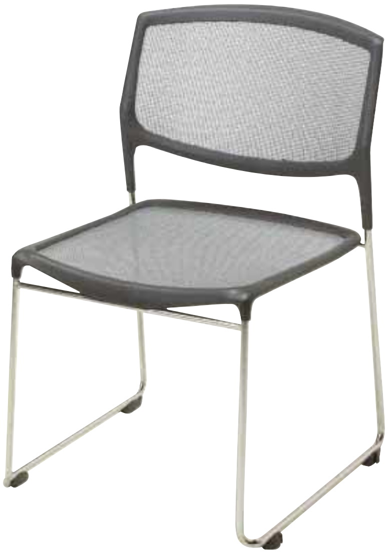


Product Briefs

► Strong alliance

Haworth and Zumtobel Staff have formed an alliance that will allow them to offer high-design elements without compromising environmental needs. Haworth's Los Angeles showroom was designed with Haworth's adaptable systems, floors, and furniture and Zumtobel's high-end lighting elements. The Zumtobel Staff products include Active Light Walls (right), LDS Light Sail metal acoustic panels with an Integral Daylight/Occupancy Sensor, a LightFields recessed fluorescent, and an EVIO suspended fluorescent with Eternit housing. Haworth, Holland, Mich. www.haworth.com **CIRCLE 219**



◄ Japanese-approved chair

The Japan Environmental Association recently awarded Eco Mark environmental certification to KI's Daylight stack chair. The Japanese government regulates that, to be ecologically responsible, at least 10 percent of a product's plastic weight must be from recycled material. Daylight's recycled components comprise 93 percent of the total plastic weight of the chair. The polypropylene plastic frame for the seat and back is made of 100 percent recycled plastic from car batteries, while the legs are made of 100 percent recyclable steel. KI, Green Bay, Wis. www.ki.com **CIRCLE 221**

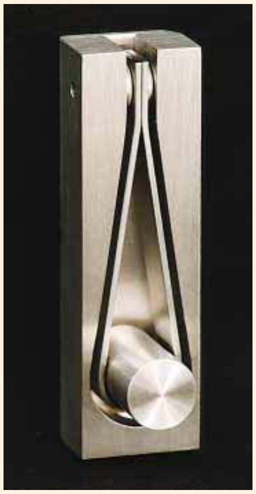
► Color-enriched architectural glass

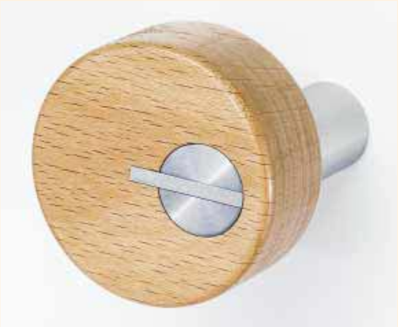
PPG Industries has introduced Vistacool Azuria glass, a subtly reflective, color-enriched architectural glass that gives a luminous aqua-blue appearance while transmitting high levels of daylight. The glass was developed to fulfill requests for a tinted high-performance architectural glass with high visible light transmittance (VLT) and a reflectivity that is more muted than the mirrorlike finish of traditional reflective glass. Vistacool Azuria has a VLT of 52 percent, roughly twice the average of other reflective, coated, tinted glass products on the market. PPG Industries, Pittsburgh. www.ppgideascapes.com **CIRCLE 222**

Product of the Month Reveal Designs' Hardware

Reveal Designs partners with global architectural design firms to create recognized brands in the architectural design of buildings and products. The White Plains, New York–based company has begun to market and sell furnishings and hardware designed by their partner architectural firms. Its charter partnership is with James Cutler of Cutler Anderson Architects in Bainbridge Island, Washington.

Handcrafted in the U.S., Cutler Anderson Architects' elegant hardware line currently includes four door-lever designs made of all metal or a wood/metal combination; escutcheons in stainless steel or oil-rubbed bronze; latch boxes in stainless steel or bronze; tear-drop-shaped door knockers (below left) in stainless steel, oil-rubbed bronze, or brass; and a cabinet pull in stainless steel, sandblasted stainless steel, and oil-rubbed bronze. The Cutler lever (below right) has a knob look but is designed to reveal the mechanics of the lever. It is available with or without keyways (shown with). Reveal Designs, White Plains, N.Y. www.reveal-designs.com **CIRCLE 220**





◄▼ Educational project

A team of faculty members from Rhode Island School of Design's Furniture Design department teamed up to design the furnishings for the college's dorm rooms at 15 Westminster Street in Providence. The Sage line includes a desk, chair, dining table, coffee table, end table, single bed, double bed, low loft bed, two styles of chests, upholstered chair, upholstered two-seater settee, and a three-seater couch. The materials include bamboo, beech, sustainable 100 percent recycled polyester fabrics, and a new form of medium-density fiberboard made with nontoxic binders. Adden Furniture, Lowell, Mass. www.addenfurniture.com **CIRCLE 223**

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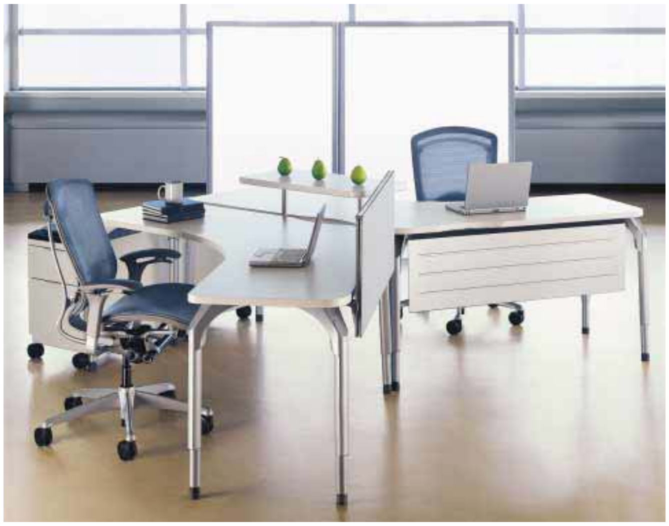
Product Briefs IIDEX/NeoCon Review

Canada's largest design-industry exposition and conference, IIDEX/NeoCon Canada, inspired attendees for the 21st time this September in Toronto. With a focus on design for adapting work and living space, the show featured product manufacturers from up north and beyond. *Ingrid Spencer*

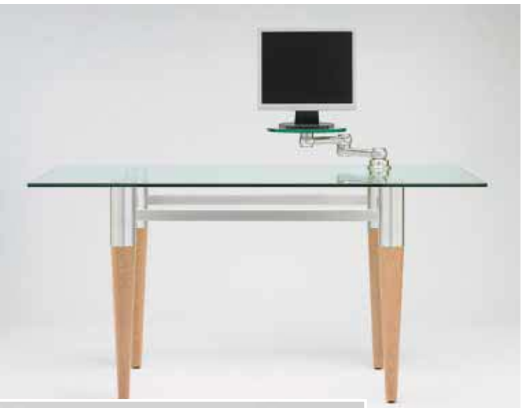
▼ It's your workspace, do what you want to do

ie, by Canadian office systems manufacturer Teknion, consists of an integrated set of multiuse components that migrate from desking layouts to post-and-beam structures. The same set of parts is employed throughout reconfiguration, and ie's look can be altered by specifying different components, materials, and finishes. The post accommodates planning and angle connections at every 15-degree interval, allowing greater floor-plan density to accommodate work patterns rather than planning around architectural restrictions. Teknion's fabrics and finishes collection consists of a wide variety of materials and finish categories designed to coordinate across all Teknion product lines, including laminates, wood veneers, and powder coats. Environmentally conscious fabrics and finishes are also available. Teknion, Toronto. www.teknion.com **CIRCLE 224**



► Offices can be elegant

MOBO Design's 2006 Series of modular office furniture brings elegant tables into the work space. Metal table bases of aluminum, bronze, stainless steel, or gunmetal are polished by hand to a mirrored or brushed-metal finish. To avoid weak joints, no components are welded. Instead, they are meticulously assembled to fit. Tabletops are square, circular, elliptical, or arc-shaped, and glass tops come with straight or beveled edges. Wood surfaces are also available. Legs come in walnut, maple, mahogany, and oak. A stylish option for the 2006 Series tables is a computer-monitor platform that swings. Unlike attached tabletop trays, the solid aluminum MOBO platform is anchored to one leg so that the whole table structure effectively supports it. MOBO Design, Montreal. www.mobodesign.com **CIRCLE 225**



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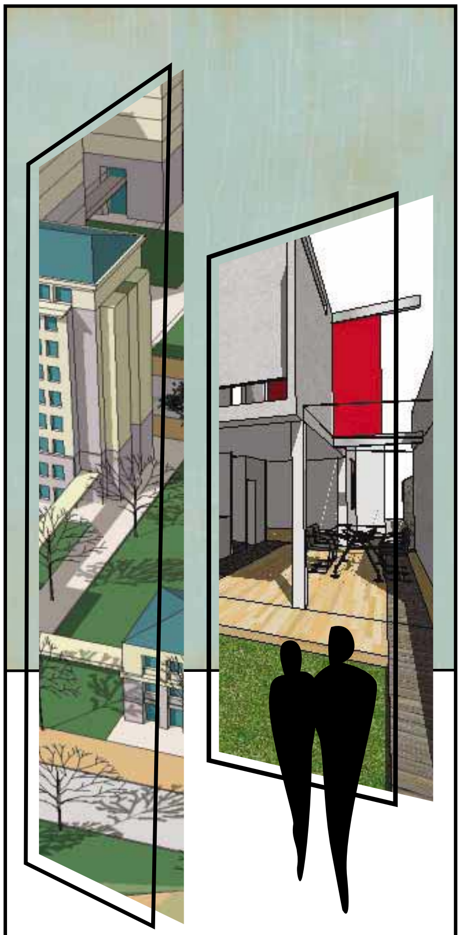

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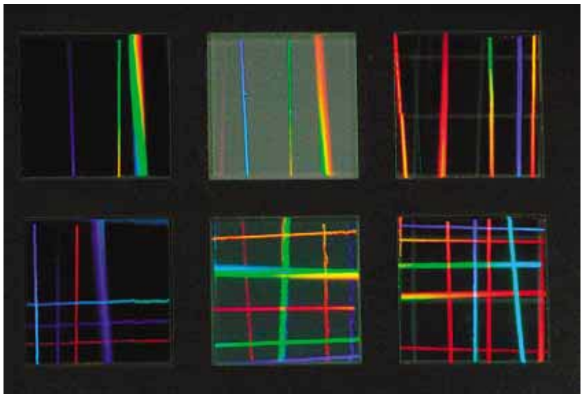
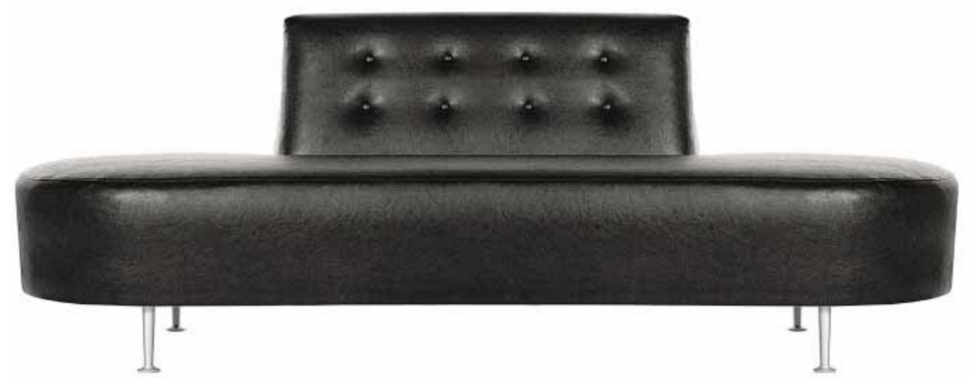


► Holographic custom finishes

Hspace produces specialized holographic glass components for use in creating holographic environments and treatments for interior and exterior walls, floors, ceilings, doors, and windows. Hspace's Spectrum Collection contains structural components in custom or standard sizes of ¼" laminated safety glass, from 2" x 2" to 24" x 24". Applying light to the holographic components, which come with monodirectional and multidirectional patterns, releases a kaleidoscope of ever-changing rainbows. Created in opaque black, opaque gray, or clear, the material has an infinite number of applications and requires the same fitting procedures as any other glass product to install. Hspace, Toronto. www.hspace.com **CIRCLE 226**

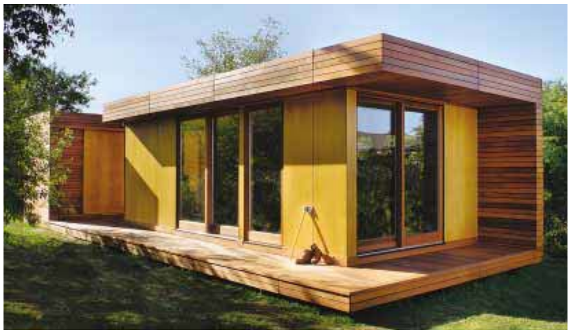


▲ Retro renews itself in lounge seating

Pulse, or "Positive Urban Life Style Experience," is a division of the Canada-based, 30-year-old company Regal Furniture Manufacturing. Its contemporary custom sofas, love seats, chairs, and other seating can be adapted to fit the needs of the client, with a variety of colors, frames, legs, foams, and fabrics to choose from, including vinyl, ultrasuede, and wool. The Babette love seat featured here (above) comes in blue, scarlet, chocolate, rust, and sage, with or without arms. Most designs can be shipped within four to five weeks, with some models shipping the next day with Pulse's Quick Ship Program. Pulse Furniture Design, Winnipeg. www.pulsestyle.com **CIRCLE 227**

▼ Prefab dwellings made simply, flexibly, and sustainably

BlueSky Mod creates beautifully designed, ecofriendly modular living structures. Using new growth lumber and recycled materials, the company buys locally whenever possible and minimizes waste in its manufacturing processes. The structures are designed for placement in any number of settings, in a variety of configurations. The system includes interchangeable walls, windows, and doors, and a range of outside and inside material finishes. The BlueSky Mod system allows for transportation and assembly in remote locations using no large equipment. Every component can be carried and assembled by two skilled workers. BlueSky Mod, Toronto. www.blueskymod.com **CIRCLE 228**



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PLANT Architect Inc.,
Toronto, ON

Merit *Award*

Grace Episcopal Church
Cutler Anderson Architects,
Bainbridge Island, WA

Madrona Residence
Vandeventer + Carlander Architects,
Seattle, WA

Belmont Street Lofts
Holst Architecture,
Portland, OR

Citation *Award*

Surrey Central City
Bing Thom Architects,
Vancouver, BC

Naramata Residence
Florian Maurer Architect,
Naramata, BC

Ghost 6 Research Laboratory
Brian MacKay-Lyons Architects [2004] Ltd.,
Halifax, NS

Prototype Infill Housing
Urban Edge Developers and Edward M. Baum FAIA,
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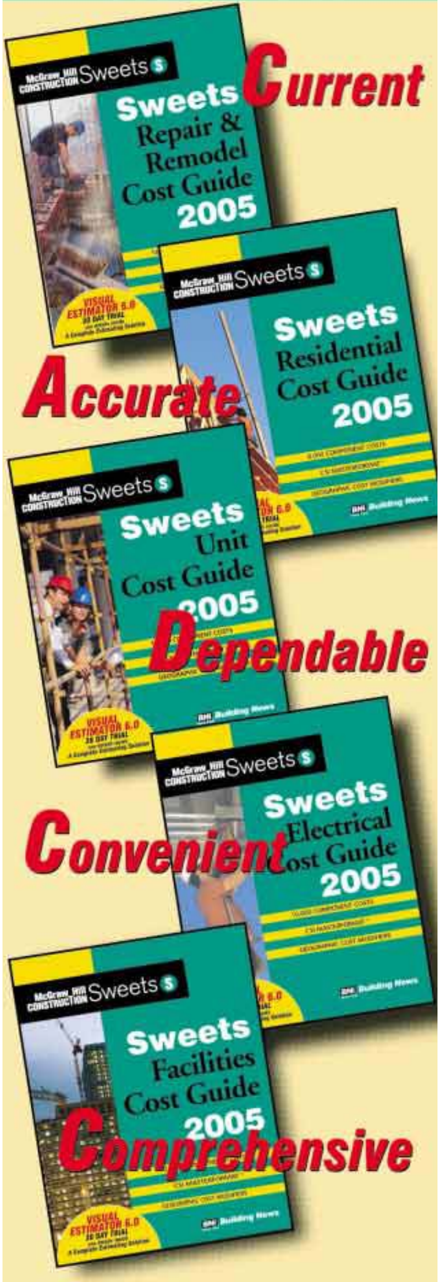
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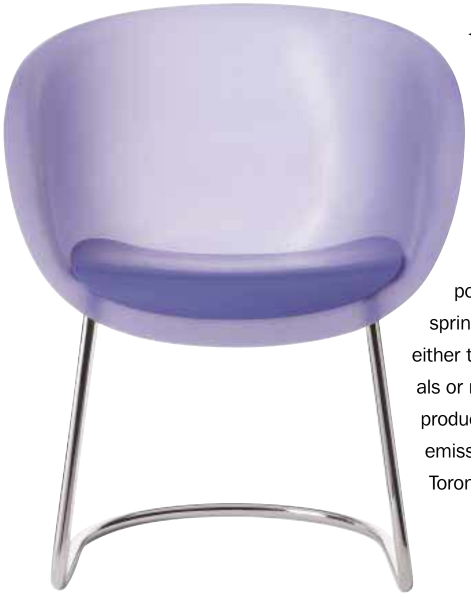

◄ Sitting pretty

The Olo chair, designed by Andrew Jones for Keilhauer, is a sculptural reinterpretation of the molded-plastic tub side chair. Choices include two heights, conference height or lounge height, with either a 4-legged base or a sled base, both in chromed steel. Seat choices include a matching solid polypropylene seat or an upholstered polyurethane foam seat cushion in colors including spring, earth, lilac, sky, frost, white, and soft black, in either translucent or solid. Keilhauer uses recycled materials or raw materials from sustainable sources to create its products, and strives to minimize or eliminate waste and emissions from the manufacturing process. Keilhauer, Toronto. www.keilhauer.com **CIRCLE 229**

► Cleaning up with dirt

The environmental mandate of DIRTT (Doing It Right This Time) is based on the behavior of its products: movable walls, low-profile access floors, modifiable furniture, and modular power, all built on the principles of reduce and reuse. DIRTT's easily adjustable and interconnecting components allow end users to reconfigure and reuse their architectural elements, technology, and furniture for several years, at which point the products are designed to be dismantled and recycled. Wall tiles come in several materials: veneer, low-pressure laminate, back-painted glass, thermal-foil, and fabric, and their skins can be changed by adding whiteboards, projection screens, or wood. DIRTT, Calgary. www.dirtt.net **CIRCLE 230**

◄ Bent glass for architectural applications

Accura Glass Bending has the ability to produce bent annealed glass and laminated glass in sizes up to 78" x 140" and thicknesses of ⅛" to 1". The company's strength lies in custom, limited production bending, but it also has the resources to manage large volume orders. Bent glass is produced in Accura's proprietary ovens in custom-fabricated molds by slowly heating the glass to approximately 600°C. The glass is then allowed to soften and embraces the shape of the mold. Accura is capable of producing a wide range of colors in addition to laminating various materials such as fabrics, metals, and graphics between two (or more) lites of glass. Accura Glass Bending, Concord, Ontario. www.accuraglass.com **CIRCLE 231**

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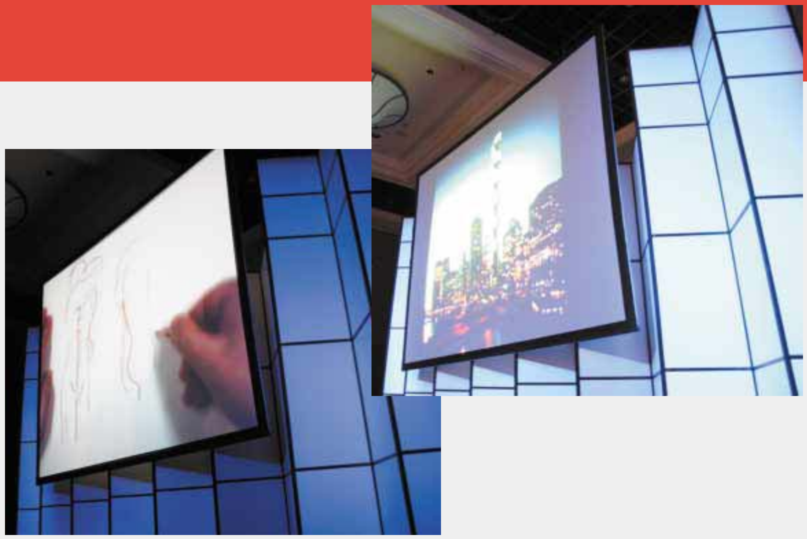

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Sage Electrochromic's new brochure *The Power to Change* describes the product's ability to tint and untint at the touch of a button and illustrates the advantages of SageGlass products over static glass when comparing heat gain coefficient and light-transmittance performance. The brochure also describes the product's ability to increase occupant comfort by reducing glare and allowing additional daylighting. Sage Electrochromics, Faribault, Minn. www.sage-ec.com **CIRCLE 232**

Guide for painting green

Green Building Guide:
LEED, CHPS & Section 09-60-00

Dunn-Edwards, a Los Angeles–based manufacturer of premium paint, has created the *Green Building Guide*, a quick-read reference guide for professionals who are developing projects in the Southwest with a green focus. The guide includes an outline of the LEED program, including details about LEED's environmental requirements for paint and a list of LEED-compliant paint products. Dunn-Edwards, Los Angeles. www.dunn-edwards.net **CIRCLE 233**

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IdeaScapes

PPG Industries has published an eight-page brochure introducing PPG IdeaScapes, a new initiative designed to provide architects and other building professionals with a comprehensive, integrated resource for architectural glass, coatings, and paint. The goal is to offer architects a common resource for market-leading products that beautify and protect all types of architectural surfaces—a capability that is exclusive to PPG. PPG Industries, Pittsburgh. www.ppgideascapes.com **CIRCLE 234**

Concrete spec guidebook

Specifier's Guide to Durable Concrete

Specifier's Guide to Durable Concrete, a new handbook from Portland Cement Association (PCA), provides instruction and basic references for those who specify and work with concrete. The *Guide* is intended as a companion to PCA's *Design and Control of Concrete Mixtures* and covers the basic concepts of concrete technology as it relates to durability. Portland Cement Association, Skokie, Ill. www.cement.org **CIRCLE 235**

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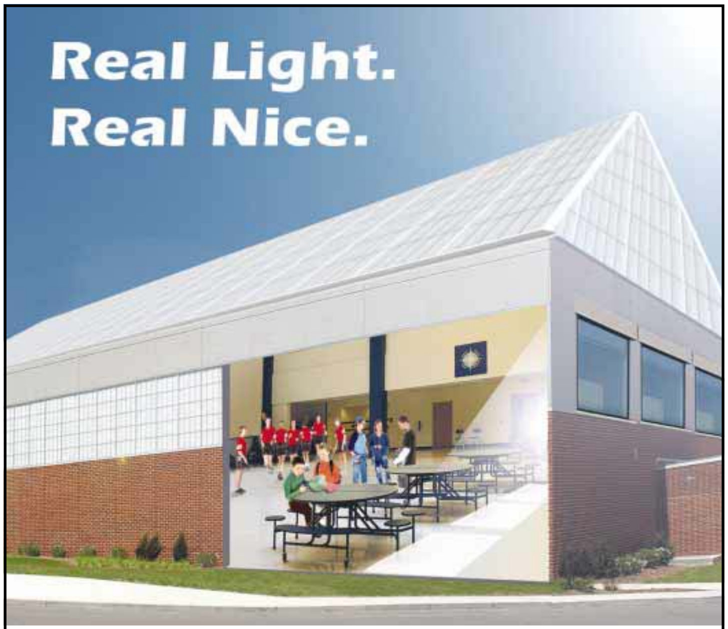

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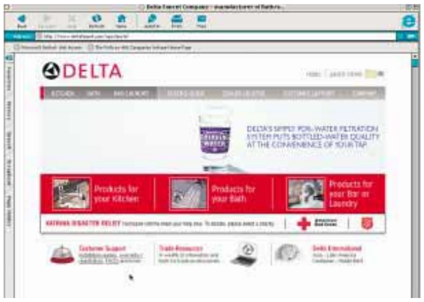
Product Resource: On the Web

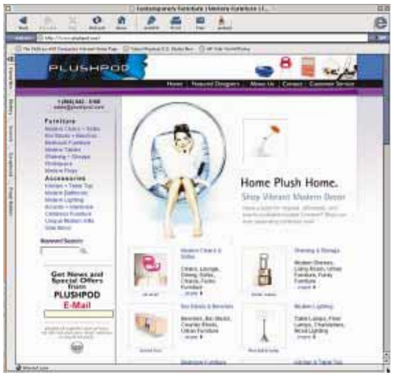
www.deltafaucet.com

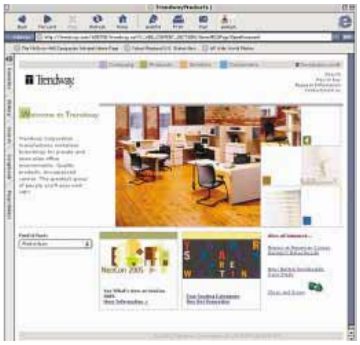
Delta Faucet Company's Web site was awarded the Standard of Excellence WebAward in the 9th Annual WebAward Competition held by the Web Marketing Association. The Web site provides consumers a tool to access detailed Delta branded products and customer service. The site includes a buyer's guide, dealer locator, and links to Delta's range of kitchen, bath, and bar/laundry products.



www.plushpod.com

Plushpod, an online store selling modern furnishings to both the trade and the public, has recently opened a flagship concept store in Los Angeles. The five-year-old site sells chairs, rugs, tables, benches, lighting, tabletop accessories, and a range of other product categories. A "Featured Designers" page offers profiles of the designers behind the objects on sale.



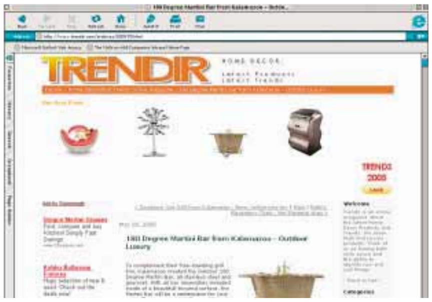


www.trendway.com

Trendway has updated the company's Web-site home page to allow information on its environmental practices to be more easily available. Visitors need only to click on an overlapping leaf image in order to instantly access information, including Trendway's Environmental Brochure and a LEED reference document on the manufacturer's Trendwall product.

www.trendir.com

Trendir is a bloglike "online magazine" maintained by interior designer Lillian Pikus that covers the latest home-design products and trends. Featuring short descriptions of high-end luxury goods such as a "sculptural" gas grill manufactured by Kalamazoo, the site is organized by Pikus's "Best Finds" section as well as a general-category listing that ranges from accessories to wall coverings.



INTERNATIONAL ARCHITECTURE COMPETITION

LIVING STEEL'S INTERNATIONAL COMPETITION FOR SUSTAINABLE HOUSING

CALL FOR EXPRESSION OF INTEREST

8 billion people, 193 countries, 1 globe, 1 challenge...

Living Steel, a worldwide programme to stimulate innovation in the design and construction of housing, has launched the first of its international architecture competitions to take on the challenge.

The first competition is underway with the call for expressions of interest to design sustainable housing in India and Poland, with the winning entries in each country being built. The buildings will be designed to advance the concept of sustainable housing, demonstrating the value and performance of steel in meeting the economic, environmental and social criteria demanded in each location. A second competition is planned for 2007 in other regions of the world.

The UIA approved competition will be judged by an independent jury, including Glenn Murcutt, Charles Correa, Jaime Lerner, Andrew Ogorzalek, James Berry and Nicholas de Monchaux (alternate).

Architects are invited to submit their expression of interest to participate in the competition by 1 December 2005. Up to 20 firms, 10 for each of the India and Poland locations, will be short listed to submit proposals for the design of the first demonstration housing developments. A range of firms, with different levels of experience and geographic practice, are desired.

Short-listed firms will be notified in January 2006 and provided with a full competition brief. Completed submissions are due by 14 April 2006 and the winners will be announced in June 2006.

Each short listed firm will be paid an honorarium of €10,000. The two winning submissions, one for each location, will be awarded a prize of €50,000 and a contract for building completion.

To learn more about Living Steel and obtain the expression of interest documents visit www.livingsteel.org or contact info@livingsteel.org.

Meeting the need for more sustainable housing is a tremendous challenge. Join us.

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New Life for the 'Big Easy'

An international competition for new housing in New Orleans

Sponsored by *Architectural Record* and McGraw-Hill Construction in partnership with Tulane University School of Architecture

New Orleans. The Crescent City. Now, wounded by Hurricane Katrina—leaving in its wake widespread damage to homes, lives, and futures—needs your 'hearts and minds' to reassess, re-envision and redesign the region's housing. To breathe new life and rebuild lives.

Architectural Record and McGraw-Hill Construction, in partnership with Tulane University School of Architecture, invite you to submit your ideas to help design the future of New Orleans. Participants in this competition will design housing for an actual block in the city of New Orleans. Winning designs will be published in *Architectural Record* and presented at the 2006 AIA Convention and Expo. Selected submissions will appear on McGraw-Hill Construction web sites.

Programmatic elements include:
- Single family housing
- Multi-family housing
- Mixed-use urban planning

Other programmatic elements:

- This competition encourages close attention to issues of sustainability, both in urban planning and architectural design.
- Contestants are encouraged to incorporate modular or prefabricated building products and processes wherever possible.

Important Note: While the competition welcomes visionary or hypothetical proposals, contestants are encouraged to consider that New Orleans faces a severe and immediate housing crisis, and is in need of practical, affordable solutions to this problem.

Competition Entry:

Go to **www.architecturalrecord.com** for submission requirements and more specific programmatic information. Competition specifics will be included in the competition packet. All entries must be received no later than **March 1, 2006.**

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Dates & Events

New & Upcoming Exhibitions

The Mythic City: New York Photographs by Samuel H. Gottscho, 1925–1940
New York City
November 1, 2005–February 20, 2006
This exhibition surveys New York City at a pivotal moment in its development, presenting a dream-like landscape of Modernist towers chiseled by sun and shadow and devoid of Depression-era ravages. At the Museum of the City of New York. Call 212/534-1672 or visit www.mcny.org.

Designing the Taxi
New York City
November 3, 2005–January 15, 2006
This exhibition presents new concepts for New York's most iconic mode of transportation, the taxicab, as it approaches its centennial in 2007. Included are design firms Pentagram, Antenna Design, Birsel + Seck, IDEO, Ken Smith Landscape Architect, TRUCK, Imagination, Hybrid Product Design, and Blue Marlin. At Parsons The New School for Design. Call 212/229-8919 or visit www.parsons.edu/events.

Excavating Design: 18th-Century Drawings and Prints
New York City
November 4, 2005–January 8, 2006
Visitors can trace the origins of Western architectural design through drawings, prints, and sketches that evoke the majesty of the Roman ruins. In the Cooper-Hewitt's new 700-square-foot ground-floor gallery. Call 212/849-8400 or visit www.ndm.si.edu.

Serving Conscience: Calvin Tsao, Tsao & McKown Architects
New York City
November 10–December 1, 2005
An exhibition of recent work by Parsons faculty member Calvin Tsao, founding partner of Tsao & McKown Architects. At Parsons The New School for Design. Call 212/229-8919 or visit www.parsons.edu/events.

In Pursuit of Pleasure: Schultze and Weaver and the American Hotel
Miami Beach, Fla.
November 13, 2005–May 28, 2006
Leonard Schultze and S. Fullerton Weaver were the preeminent architects/designers of American hotels in the 1920s and 1930s. The exhibition focuses on the firm's hotels. which include the Waldorf Astoria, Sherry-Netherland, Pierre, Breakers, Biltmore Chain, Nautilus, and Roney Plaza. At the Wolfsonian-FIU Museum, which owns the entire Schultze and Weaver archive. Visit www.wolfsonian.org.

Kumamoto Artpolis: Architecture through Communication
Los Angeles
November 14–December 23, 2005
An exhibition of 70 projects by contemporary Japanese architects to improve the architectural culture of Kumamoto, Japan, includes work by Hitoshi Abe, Tadao Ando, Jun Aoki, Toyo Ito, and Kazuyo Sejima. At Perloff Gallery, UCLA Department of Architecture and Urban Design. Call 310/267-4704 or visit www.aud.ucla.edu.

Transcending Type
New Haven
November 14, 2005–February 3, 2006
This exhibition was curated by the editors of ARCHITECTURAL RECORD for the 9th International Venice Architecture Biennale held in September 2004. To fit the Biennale's title, *Metamorph*, alluding to landmark changes in architecture largely fueled by the digital revolution, the curators invited six inventive young architects to share their unique visions of characteristically American building types. At Yale School of Architecture gallery. Call 203/432-2288 or visit www.architecture.yale.edu.

The Design Workshop: Seven Years of Design Build at Parsons
New York City
November 17–December 19, 2005
This exhibition showcases seven years of The Design Workshop, an annual program in which graduate architecture students at Parsons collaborate with nonprofit organizations in New York City to design and build a project over a period of eight months. At Parsons The New School for Design. Call 212/229-8919 or visit www.parsons.edu.

Projective Crossings
Syracuse, N.Y.
November 21–December 16, 2005
A "digital exhibition" in Slocum Hall at Syracuse University School of Architecture. Call 315/443-2255 or visit www.soa.syr.edu for information.

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lectures

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DC Builds
An ongoing lecture series focusing on current architectural, planning, and public policy issues affecting Washington, D.C.

Building for the 21st Century
A lunchtime lecture series exploring energy-efficient and economical new technologies and construction techniques

exhibitions

LITRACON, SEEN IN LIQUID STONE. COURTESY LITRACON © GMBH

Liquid Stone: New Architecture in Concrete
through January 29, 2006

Jewish Washington: Scrapbook of an American Community
through January 8, 2006

Washington: Symbol & City
long-term exhibition

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Dates & Events

Cityscapes Revealed: Highlights from the Collection
Washington, D.C.
Opening: December 3, 2005
This long-term exhibition explores America's architectural heritage through original building fragments; rare, early-20th-century photographs; intricate architectural drawings, and more. Reflecting the National Building Museum's rich permanent collection relating to quintessentially American, 20th-century building typologies, from Beaux-Arts style to Main Street storefronts and sleek downtown skyscrapers, the show is presented in honor of the museum's 25th anniversary. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Ongoing Exhibitions

ReThink/ReDesign/ReCycle
Chicago
The ongoing exhibition *Competition: Public Process for Public Architecture* will be updated with the display of more than 100 entries for the competition to design on-street recycling bins created by members of the City of Chicago and the AIA Chicago Young Architects Forum. At the CAF's CitySpace Gallery. Call 312/922-3432 or visit www.architecture.org for more information.

Drive-Ins: The Last Picture Show
Baltimore
Through November 23, 2005
Documenting drive-in movie theaters from across the country, the photographs by Elaine Reed de Laszlo depict the theaters as pure forms of American architecture at its most vernacular. At the Architects Bookstore and Gallery. Visit www.aiabalt for further information.

Brick-Work: Weight and Presence
Zurich
Through December 1, 2005
An exhibition of the Institute GTA in cooperation with Sergison Bates Architects, London. At the Swiss Federal Institute of Technology Honggerberg. Call 41 44 633/29-36 or visit www.austellungen.gta.arch.ethz.ch.

Zero Gravity: The Art Institute, Renzo Piano, and Building for a New Century
Chicago
Through December 4, 2005
An exhibition tracing the design process of Renzo Piano and the expansion of the Art Institute of Chicago. At the Art Institute of Chicago. Call 312/443-3600 or visit www.artic.edu/aic.

International Arts and Crafts
Indianapolis
Through January 2006
Organized by the Victoria and Albert Museum in London, the exhibition features more than 300 objects from Great Britain, where the Arts and Crafts movement began, as well as America, Europe, and Japan. At the Indianapolis Museum of Art. For more information, visit www.ima-art.org or call 317/923-1331.

Lectures, Conferences, and Symposia

Eric R. Multhauf Wednesday Lunchtime Lectures
Chicago
November 2–30, 2005
Free lectures include Elias Vavaroutsos, "Fragment and Particularity"; Douglas Garofalo, "Recent Work"; Caroline Constant, "Dialogue vs. Manifesto: The Architecture of Eileen Gray"; and Sheree Pomper, "Loop Firm Breaks New Ground with U.S. Debut of Shadow Mural." At the ArchiCenter. Call 312/942-3432 or visit www.architecture.org.

17th ASBI Convention
Washington, D.C.
November 6–8, 2005
Cosponsored by the U.S. Department of Transportation Federal Highway Administration, the American Segmental Bridge Institute Convention (ASBI) includes consultants, contractors, material suppliers, transportation agencies, PCI Producer Members, and trade associations in this three-day event. At the Hyatt Regency on Capitol Hill. Call 602/997-9964 or visit www.asbi-assoc.org.

Lecture: Hernan Diaz-Alonso
Los Angeles
November 7, 2005
Hernan Diaz-Alonso is founder and principal of Los Angeles–based firm Xefirotarch, an award-winning design firm in architecture, product, and digital motion. The firm's first solo exhibition is scheduled for March 2006 at the San Francisco Museum of Modern Art. At Perloff Hall, UCLA Department of Architecture and Urban Design. Call 310/267-4704 or visit www.aud.ucla.edu.

GreenBuild 2005
Atlanta

November 8–12, 2005

In its fourth year, this conference and expo includes extensive educational programming, workshops, an exhibition floor, and networking events. At GreenBuild, learn about the leading edge of the building and construction industry, including the latest updates and expansions of the LEED Green Building Rating System. For further information, visit www.greenbuildexpo.org.

Lecture: Lorcan O'Herlihy
Washington, D.C.

November 9, 2005

Los Angeles–based architect Lorcan O'Herlihy creates imaginative forms through site-responsive design. In 2004, the Architectural League of New York named him an Emerging Voice in Architecture. He will discuss his firm's use of unexpected materials in creating light-filled, innovative buildings, which include the Vertical House, West Hollywood's Habitat 825 (next to Rudolph Schindler's house), and a mixed-use development in China. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Panel Discussion: 3 Architects on 5 Architects
Chicago

November 9, 2005

Panelists will discuss how the profession of architecture has changed over the past century, including such issues as the evolving role of women and whether the profession has become more collaborative or more complex. At the ArchiCenter. Call 312/942-3432 or visit www.architecture.org.

Baltimore Renaissance: An Outsider's Point of View
Baltimore

November 9, 2005

Mayor Joseph P. Riley, Jr., has received a countless number of awards for his revitalization efforts during his 30-year residency as mayor of Charleston, South Carolina. He is considered an expert source on urban design and habitat concerns. AIA Baltimore brings Mayor Riley to speak at the Maryland Institute College of Art. Call 410/625-2585 or visit www.aiabalt.com.

Lecture: Frank Schlesinger, Architect
Washington, D.C.

November 10, 2005

For nearly 50 years, Frank Schlesinger has designed Modernist private residences, offices, and religious buildings, many of which demonstrate an ongoing interest in the use of courtyards as a basis for space-making. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Shigeru Ban: Giving Shelter, from Kobe to Rwanda
Chicago

November 12, 2005

See how this award-winning Japanese architect has provided refugee housing around the world, ingeniously using the inexpensive and ubiquitous material of cardboard to stunning effect. At the Museum of Contemporary Art. Call 312/494-9509 or visit www.chfestival.org.

National Award for Smart Growth
Washington, D.C.

November 15, 2005

At the fourth annual ceremony for the National Awards for Smart Growth Achievement, the U.S. Environmental Protection Agency will honor up to five communities for their innovative strategies for building neighborhoods that provide safe and decent places to live and work, protect natural and historic places, and create a balanced transportation system. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Lectures from the Edges of Architecture: Thickness
Chicago

November 16, 2005

Greg Pasquarelli of SHoP explains how his architectural firm uses unique, cutting-edge technology to create dynamic design solutions. At the ArchiCenter. Call 312/922-3432 or visit www.architecture.org.

Building on Barnes: Reflections by Contemporary Architects and Critics
New York City

November 16, 2005

Edward Larrabee Barnes (1915–2004), an American architect known for his original, modern approach to designing houses, skyscrapers, museums, and educational and religious buildings, is celebrated through presentations by architects and critics who offer their perspectives on the span of his career and his designs for the UCLA Hammer Museum and Walker Art Center.

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At the Museum of Modern Art's Titus Theater 2. Call 212/708-9431 or visit www.moma.org for more information.

Lecture: The Chicago Architectural Club
Washington, D.C.
November 17, 2005
Architect and author Wilbert R. Hasbrouck will analyze late-19th-century Chicago as the birthplace of Modern architecture in the U.S. and a magnet for aspiring architects. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

2005 Patron of the Year Award Nominee Announcement
Chicago
November 17, 2005
The Chicago Architecture Foundation will announce the nominees for its Second Annual Patron of the Year Award at its Annual Luncheon. The award seeks to honor those individuals or organizations that have helped promote innovative architecture in Chicago. At the Mid-Day Club, Bank One Plaza. Call 312/922-3432 or visit www.architecture.org.

Lecture: James Carpenter
Washington, D.C.
November 21, 2005
The 2004 MacArthur Fellow and principal of New York–based James Carpenter Design Associates will discuss his projects, which include New York's Seven World Trade Center with Skidmore, Owings & Merrill, Fulton Street Transit Center with Grimshaw and Partners, New York, and the Blue Glass Passage for Seattle's City Hall. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Lecture: Yung Ho Chang
San Francisco
November 21, 2005
Beijing-born architect Yung Ho Chang is one of the world's most closely watched Chinese architects. Chang spent 15 years studying and teaching in the United States before returning to Beijing in 1993 to open Atelier FCJZ (feichang jianzhu), which translates as "unusual architecture." At the California College of the Arts (CCA). Call 415/551-9251 or visit www.cca.edu/calendar.

Lecture Series: Out There Doing It—The Return
Los Angeles
Through November 23, 2005
First held in 1989, the Los Angeles Forum for Architecture and Urban Design's "Out There Doing It" series has provided Los Angeles with a key venue for emerging design practitioners, this year with a focus on work that is experimental, emerging, theoretical, and conceptual. At the MAK Center's Schindler House. For more information call, 323/651-1510 or visit www.laforum.org or www.MAKcenter.org.

Lecture: Anthony Vidler
Los Angeles
November 28, 2005
Vidler is a historian and critic of modern and contemporary architecture, specializing in French architecture from the Enlightenment to the present. At Perloff Hall, UCLA Department of Architecture and Urban Design. Call 310/267-4704 or visit www.aud.uclaedu for further information.

Middle-East Architecture Design Conference/Exhibition
Kuwait City
December 3–7
The event will unite architecture and design professionals to discuss developments in the built environments of the Muslim world, including the Aga Khan Award for Architecture, and economic, social, and cultural planning for Kuwait City in particular. At the Kuwait Mariott Courtyard Hotel. Visit www.kuwaitdirection.org.

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Dates & Events

Competitions

Tsunami Memorial Design Competition
Registration: September 15–November 15, 2005
The government of Thailand is staging the Tsunami Memorial Design Competition to gather and develop concepts for a Tsunami Memorial. For more information, visit www.tsunamimemorial.or.th or e-mail info@tsunamimemorial.or.th.

Southpoint: From Ruin to Rejuvenation—The Roosevelt Island Universal Arts Center International Ideas Competition
Registration: September 1–November 18, 2005
Deadline: January 13, 2006
The Emerging New York Architects Committee, AIA N.Y. Chapter, announces the second biennial international ideas competition to explore issues of universal design and historic rejuvenation in developing a visual/performing arts center on Roosevelt Island. Visit www.enyacompetitions.org.

Urban Voids: Grounds for Change—An International Design Ideas Competition
Registration Deadline: November 14, 2005
Participants from around the world are invited to suggest compelling ideas for Philadelphia's vacant land. The competition seeks answers to the question, "How can a city respond to the crisis of vacancy?" With more than 40,000 vacant properties representing nearly 1,000 acres, Philadelphia has become one of the nation's foremost examples of urban abandonment and extensive sprawl. Visit www.vanalen.org/urbanvoids.

KROB 05: The 31st Annual Ken Roberts Memorial Delineation Competition
Deadline: November 11, 2005
The Ken Roberts is the most senior architectural drawing competition currently in operation anywhere in the world. Visit www.krob05.com.

West End Pedestrian Bridge Competition
Pittsburgh, Pa.
Registration Deadline: November 23, 2005
The competition is open to architects, landscape architects, urban designers, engineers, interior designers, artists, and students. The challenge is to complete a loop of riverfront trails connecting Pittsburgh's shorelines, enhancing the city's skyline, and providing new access points to the riverfront from neighborhoods now separated by highways and parking lots. Visit www.riverlifetaskforce.org.

New Faces of Engineering 2006
Deadline: November 23, 2005
Any engineer, from any discipline, 30 years of age or younger with a degree in engineering from a recognized U.S. college or university or equivalent international educational institution, is eligible. For further information, visit www.eweek.org or www.discoverengineering.org.

2005 Source Awards
Deadline: December 2, 2005
This national lighting design competition, which focuses on furthering the understanding and function of lighting as a primary element in design, is open to all lighting designers, architects, engineers, interior and professional designers, and consultants who use Cooper Lighting fixtures in interior or exterior design projects. Visit www.cooperlighting.com.

E-mail event and competition information two months before event or submission deadline to elisabeth_broome@mcgraw-hill.com. Edited by Alexandra Gates.

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Flexicomb honeycomb panels developed by PadLab, will be just one of the materials featured in *Architectural Record*'s Innovation issue, available at the conference.

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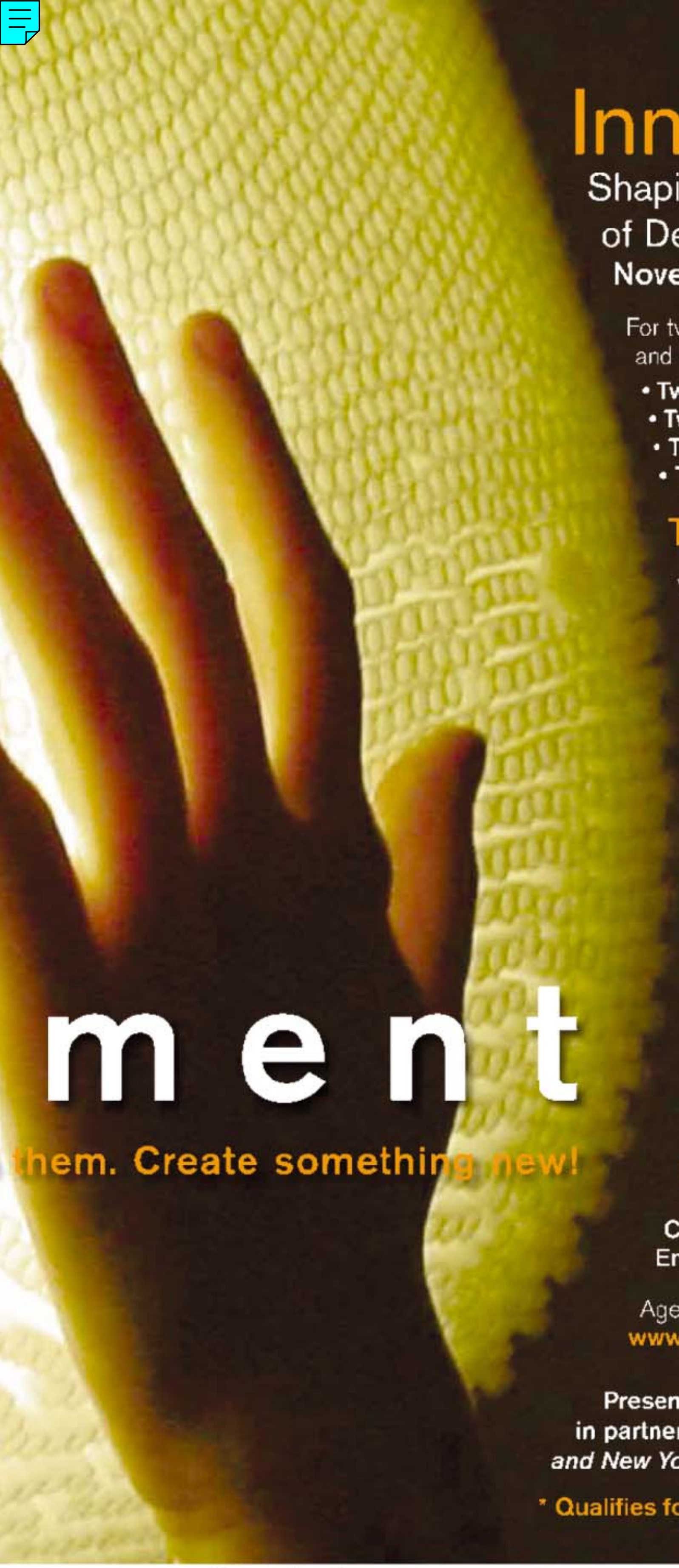

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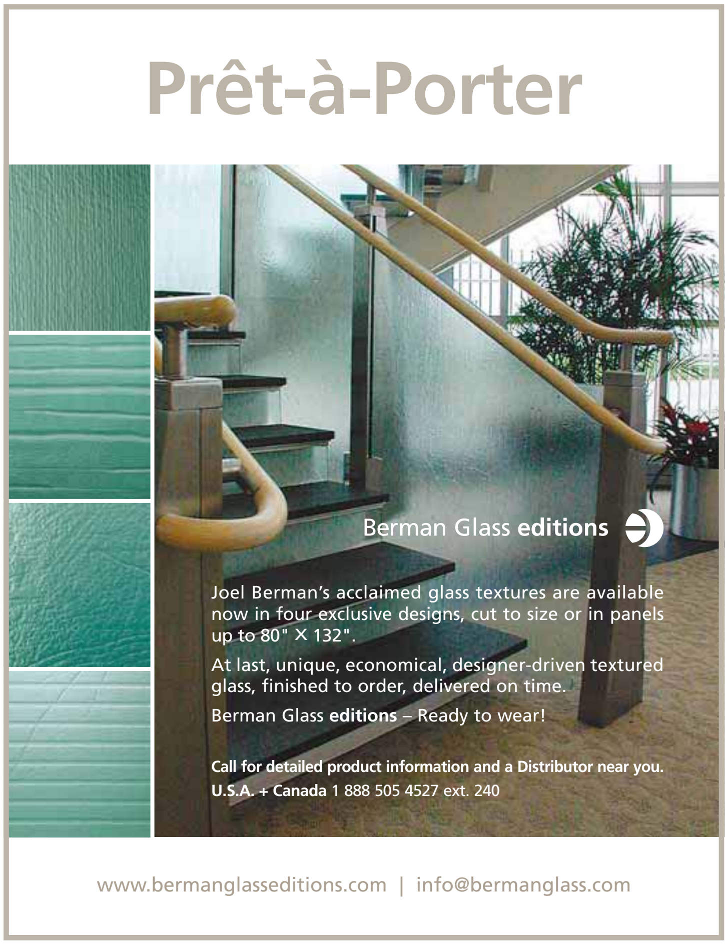

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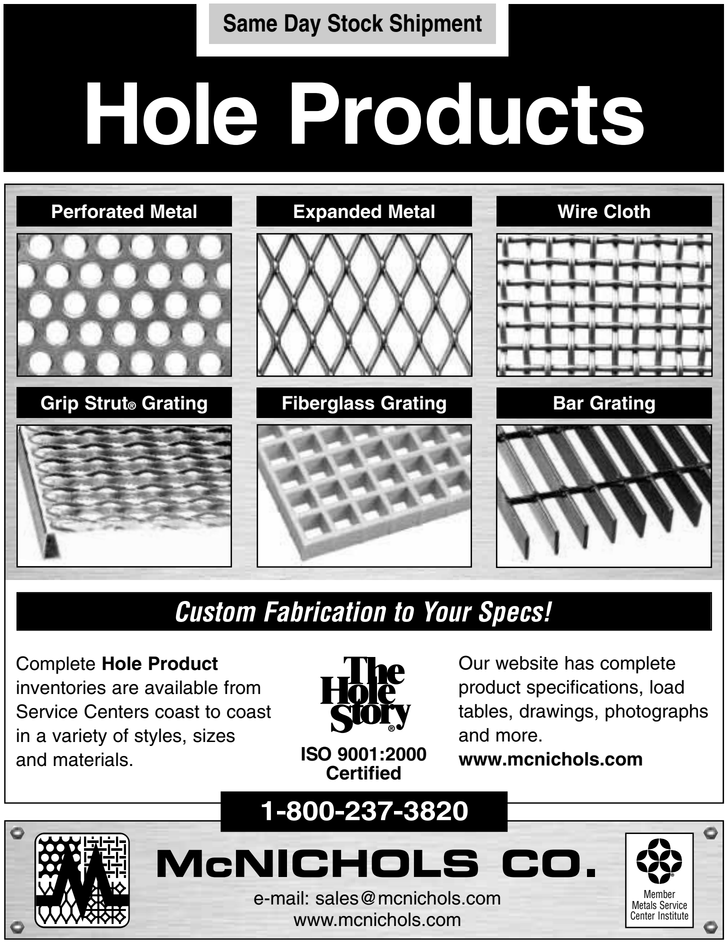

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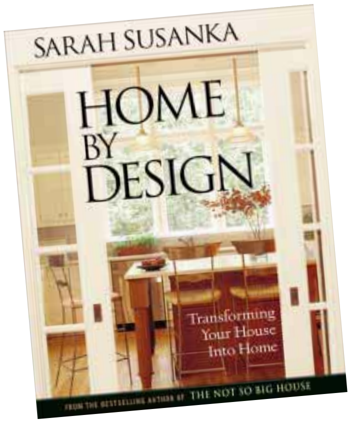
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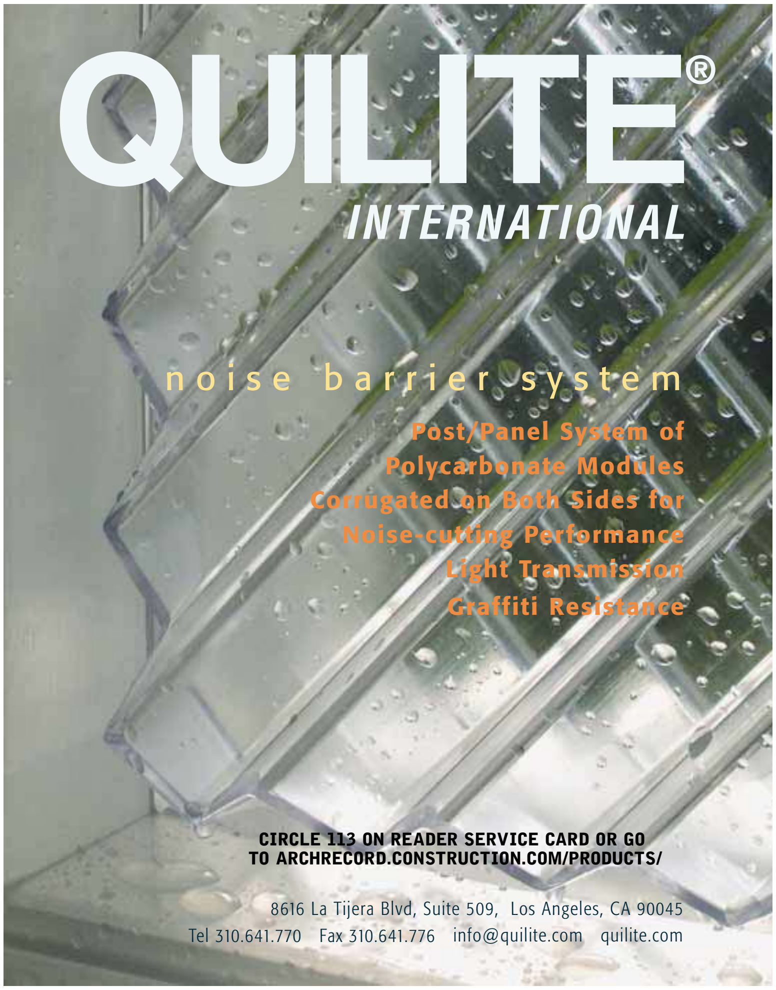
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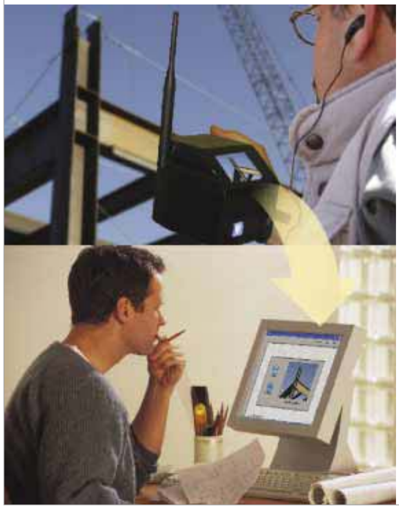

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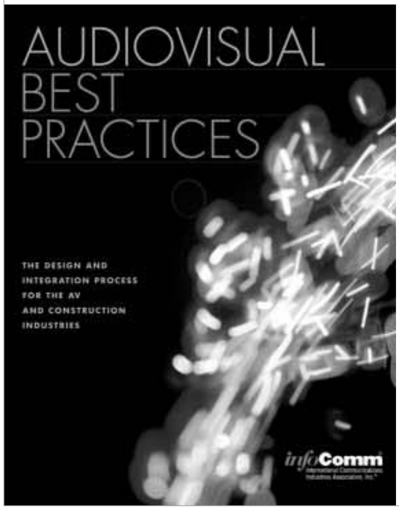
People can get away from the city right on their own roofs. By using the unique PAVE-EL® Pedestal system, you can transform a flat roof into an attractive, usable, maintenance-free, landscaped paver stone terrace. It is also ideal for laying walkways in green roof gardens. The PAVE-EL system elevates paver stones for perfect drainage. It also levels pavers and ensures their uniform spacing for an ideal roof terrace surface.

716-689-8548
www.EnvirospecInc.com

| Circle Reader Service #154

Must-Read Book for Architects

1 General data



InfoComm International

First printing sold out. Now in second printing, *Audiovisual Best Practices: The Design and Industries* is a complete resource for architects which explains everything about the AV design and installation process. Softcover. 214 pgs. $64.50. Published by InfoComm International.

800-659-7469
www.infocomm.org

| Circle Reader Service #152

Invisible Swing Gate Operators

2 Site construction

UL 325
Model
760

FAAC International, Inc.

FAAC is the world's largest specialized manufacturer of hydraulic operators for swing, slide and barrier gate systems. The Model 760 hydraulic swing gate operator is designed specifically for in-ground installation for residential applications. Its power, reliability and invisibility make the 760 ideal for large ornate gates. For more information on the 760 and other FAAC products, visit the company's web site.

800-221-8278
www.faacusa.com

| Circle Reader Service #155

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Fencing

2 Site construction

Filtrona Extrusion

PDS™ Fence Products represents innovation, diversity and quality which allow them to lead the market with a full line of products which add privacy, security and safety while enhancing the look of your chain link or ornamental fence systems.

800-822-7528
www.pdsfence.com.

| Circle Reader Service #156

Thin Brick Products

4 Masonry

Boulder Creek Stone

You put a lot of care into your home or building. So do they. Every one of their thin brick products are made with only the finest materials and are designed to withstand the test of time while providing a cost-effective and versatile alternative to traditional applications.

| Circle Reader Service #159

Commercial Grade Outdoor Furniture

2 Site construction

Modern Outdoor

High style, clean-lined simplicity, short lead times, environmentally conscious materials—these are the attributes of Modern Outdoor—a producer of top quality outdoor furniture with a definitive modern aesthetic. The Modern Outdoor Collections are commercial grade products designed for the restaurant, hospitality, and resort industries, with an aesthetic that is perfect for a residential client's backyard setting. The entirety of the Collection is made from Ipe, Electropolished Stainless Steel and Natural Composite materials. Modern Outdoor offers attractive pricing.

818-838-7060
www.modernoutdoor.com

| Circle Reader Service #157

Thin Stone Cladding Systems

4 Masonry

red door spa

Stone Truss Systems, Inc.

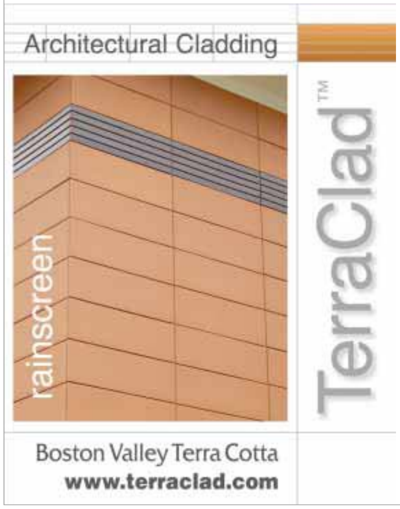
Thin lightweight natural stone wall cladding by THIN STONE SYSTEMS, LLC offers economical solutions for new construction and renovation, for both exterior and interior. Reinforced by a special patented process, the thin veneer panels of natural granite, marble, or limestone are applied to a structural framing system of extruded aluminum. Weighing only 6-lb. psf, the wall system provides many advantages including speed and simplicity of installation.

212-838-7667
www.thinstonesystems.com

| Circle Reader Service #160

Architectural Cladding System

4 Masonry



Boston Valley Terra Cotta Inc.

A "green" architectural cladding system delivering the advantages of rain screen performance while retaining the beauty and richness of terra-cotta. Terraclad is a fired ceramic material produced in the U.S.A. in Boston Valley Terra Cotta Company's state of the art facilities in Orchard Park, NY. Available in colors, sizes and patterns to match the designer's imagination.

888-214-3655
www.bostonvalley.com

| Circle Reader Service #158

Pre-Engineered Railings

5 Metals

Handrail Design, Inc.

CIRCUM™ stainless railing system: Manufactured of corrosion-resistant stainless steel, CIRCUM is ideal for interior or exterior applications in commercial and residential facilities. Infill panels available in, but not limited to, perforated stainless steel, tempered glass, and stainless steel rods. Handrails in wood/stainless, stainless, or colored nylon. Curved rails and custom designs are available. HDI Railing Systems. E-mail info@hdirailings.com

717-285-4088
www.hdirailings.com

| Circle Reader Service #161

Safety Railings

5 Metals

Kee Industrial Products, Inc.

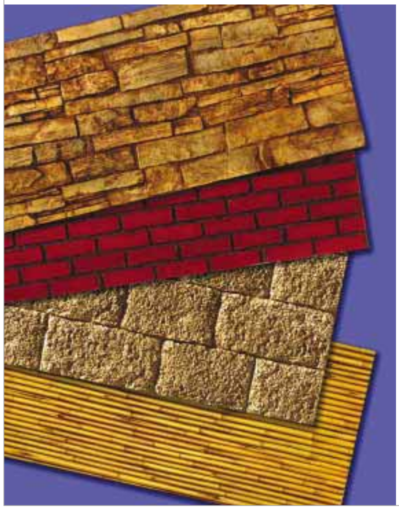
OSHA-compliant Kee Klamp® slip-on, structural pipe fittings for railings, awnings, display fixtures, lighting grids, and other tubular pipe structures provide a strong, lower-cost alternative to installing welded railings. Galvanized for corrosion-resistance, Kee Klamp fittings are available in more than 70 styles in a variety of sizes to fit standard pipe from 1/4-in. to 2-in. diameter. Newer fittings allow for flat panels to be attached to tubular pipe structures. Complete line of fittings includes crossovers, tees, in-line joints, swivel fittings, base fittings, wall flanges, elbows, corners, internal spigots, slopes and angles.

800-851-5181
www.KeeGuard.com

| Circle Reader Service #162

High-Density Polyurethane Panels

6 Wood & plastics



Architectural Products by Outwater, LLC

Achieve the look of authentic Stone, Brick, Wood and many other realistic surfaces for a fraction of the cost with Outwater's innovative 2-ft. by 4-ft. high-density polyurethane FauxStone Panels, designed and manufactured with exacting realism to visually and texturally replicate the original building materials from which they have been modeled. Ideally suited for interior or exterior use in a vast number of commercial and residential applications, Outwater's maintenance free FauxStone Panels are not only lightweight, impact resistant, dimensionally stable as well as impervious to adverse climate and weather conditions.

800-835-4400
www.outwater.com

| Circle Reader Service #165

Online Resource for Balustrade Products

5 Metals

Melton Classics, Inc.

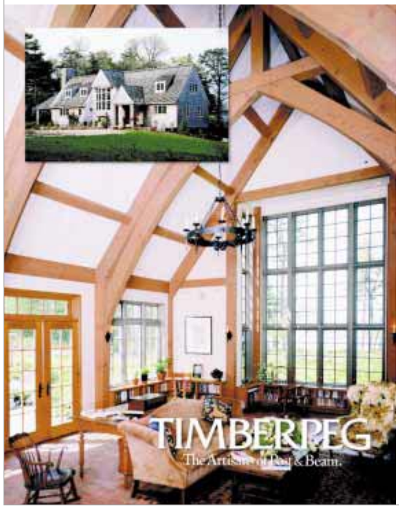
Announcing balustrades.com. Melton Classics balustrades.com web site provides the design professional with the industry's most comprehensive selection of maintenance-free and low-maintenance balustrade products, allowing the design professional to select the ideal product for any design, application, and budget. Classic balustrade systems are available in integrally pigmented synthetic stone, marble/resin composite, cast stone, high density polyurethane, and fiberglass in over 50 sizes and designs.

800-963-3060
www.meltonclassics.com

| Circle Reader Service #163

Custom Timber Frame Structures

6 Wood & plastics



Timberpeg

Using the highest available grades of eastern white pine and Douglas fir, Timberpeg planes and pre-cuts the timbers; can pre-finish, chamfer, and carve; and supplies all the parts so the frames are quickly assembled in the field. Complete enclosure packages available. Custom iron detailing is also available. Timberpeg has assisted architects in bringing hundreds of residential and nonresidential projects to fruition since 1974. By designing the needed joinery, supplying shop drawings, and being responsible for timber frame engineering, Timberpeg can save the architect valuable time and money.

800-636-2424
www.timberpeg.com

| Circle Reader Service #166

Aluminum Flooring

5 Metals

Power Stretch

Aluma Floor™ is manufactured with 3/16-in. solid aluminum. A "Floor of The Future" is now here. Let your creativity run. Call or visit their web site.

630-628-0226
www.aluminumfloors.com

| Circle Reader Service #164

Snow Guards

7 Thermal & moisture protection

Alpine SnowGuards

Alpine SnowGuards' snow guards set the standard for performance and design. Designed for slate, flat tile, cedar, and other shingle style roofs, the #10 snow guard is both functional and aesthetically pleasing. Ease of installation and minimal maintenance make it a favorite to customers all over the world. The #10 is available in copper, lead-coated copper, zinc, galvalume, aluminum, and painted aluminum which makes this snow guard the perfect complement to any roofing material. Layout and installation recommendations are available from Alpine's sales staff.

888-766-4273
www.alpinesnowguards.com

| Circle Reader Service #167

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Shake

7 Thermal & moisture protection

CertainTeed Corporation, Roofing Products Group

With a timeless style worthy of its name, the CertainTeed Presidential Shake™ is designed to exceed the industry's toughest performance standards. Constructed of two laminated layers of the most durable roofing materials, the solid 355-pound shingles provide an extra layer of protection and peace of mind.

800-233-8990
www.certainteed.com

| Circle Reader Service #168

Snow & Ice Protection

7 Thermal & moisture protection

M.J. Mullane Co., Inc.

Mullane Snow Guards is now in its 23rd year of manufacturing quality snow and ice retention products. The Bronze Guard® line continues to expand its cast bronze products, which have proven to be among the most durable and attractive in the industry. The three-pipe bronze fence bracket has over 4,000-lb. capacity and its smooth lines are compatible with historic restoration or new construction. Architectural castings do not crack from ice, water, and temperature extremes. Mullane Co. recently acquired the historic Fitrite-David Levow Snow Guard Company.

978-568-0587
www.bronzeguard.com

| Circle Reader Service #171

Slate

7 Thermal & moisture protection

CertainTeed Corporation, Roofing Products Group

Teed's Centennial Slate™ replicates the natural color variations of true blended slate at a fraction of the cost. Through a sophisticated, patent-pending production process, CertainTeed precisely applies color to individual tabs to create its distinguished look. Centennial Slate is available in six colors and utilizes CertainTeed's exclusive Super Shangle® construction.

800-233-8990
www.certainteed.com

| Circle Reader Service #169

Metal Building Components

7 Thermal & moisture protection

Metal Sales Manufacturing Corporation

With 19 branches throughout the United States, Metal Sales Manufacturing Corporation is one of the building industry's premier providers of metal building components. They produce metal roofing, siding panels, and accessories for agricultural, commercial, architectural, industrial, and residential building projects of every shape and size—new construction or retro-fit. Metal Sales has a 40-year history of providing cutting-edge products, impeccable service from highly trained professionals, and the largest sales force in the industry.

800-406-7387
www.metalsales.us.com

| Circle Reader Service #172

Metal Snow Guards

7 Thermal & moisture protection

East Coast Lightning Equipment

East Coast Roof Specialties, a Division of East Coast Lightning Equipment, introduces Ice-Brakes—metal snow guards for metal roofs. Their cast aluminum pad style snow guards are designed to prevent dangerous and destructive snow and ice avalanches from metal roofs by holding built-up snow in place. Ice-Brakes are low profile—projecting just over 1-in. from the surface of the roof. They cast little shadow and are less conspicuous than taller style snow guards. Ice-Brakes are installed with or without roof penetrations, and are handcrafted and economically priced.

860-379-9072
www.icebrakes.com

| Circle Reader Service #170

Roof Penetration Flashings

7 Thermal & moisture protection

SBC Industries

SBC Industries has developed a complete line of easy-to-install roof penetration flashings that replace pitch pans known to require maintenance and commonly cause roof failure. They are approved and endorsed for use in warranted roofs by a number of system manufacturers. These stainless steel flashings are compatible with most materials and are the answer to problems with flashing of angle irons, I and H beams, pipes, square tubing, channels, conduits, coaxial and lightning cables, and struts. Available in either a split or a slipover design.

800-228-2580
www.sbcflashings.com

| Circle Reader Service #173

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TO ADVERTISE: Contact Deidre Allen
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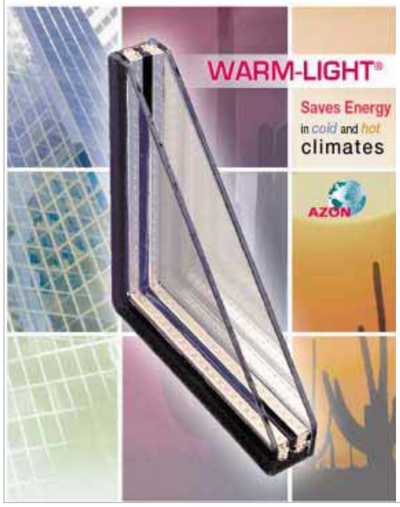
deidre_allen@McGraw-Hill.com

Extreme Performance Commercial Insulated Glass

8 Doors & windows



AZON USA Inc.

Warm-Light® spacer from Azon creates a warm-edge glass unit that reduces thermal conductivity in any climatic condition. The result is a dramatic reduction in condensation on the glass surface in cool climates and less heat transfer in warm climates, as well as lower utility costs and a more comfortable interior environment. The polyurethane core in Warm-Light spacer is 100 times less conductive than stainless steel or conventional aluminum spacer. Also enables design flexibility for a variety of building types, window sizes and styles, with standard and custom colors.

800-788-5942
www.warmedge.com

| Circle Reader Service #174

Walkable Laminated Safety Glass

8 Doors & windows

General Glass International

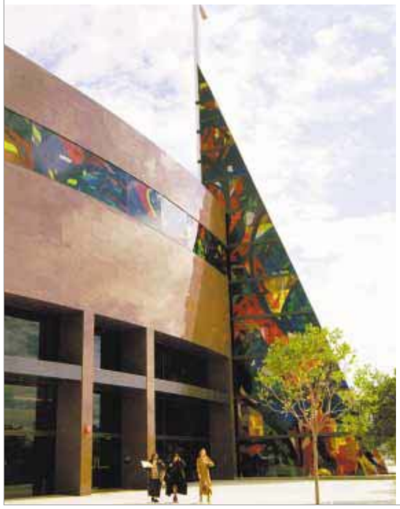
Bi-Step Structural Glass Flooring by BGT offers design freedom for artful expression while meeting the functional needs of any project. It is a walkable laminated safety glass for use in floors, bridges, landings, and stairs. It offers code compliant slip-resistant friction values and proven structural integrity.

800-431-2042
www.generalglass.com

| Circle Reader Service #177

Stained Glass Meets Codes

8 Doors & windows



Bovard Studio Inc.

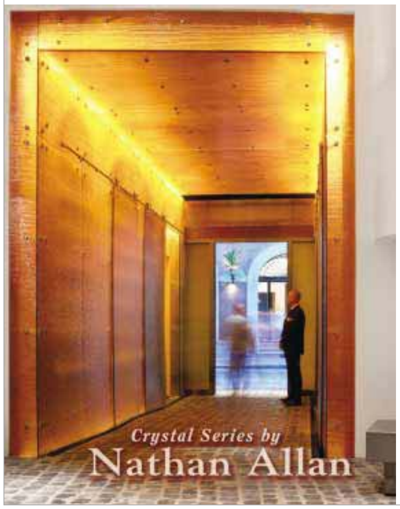
Bovard Studio Inc. Stained Glass has developed a proprietary process for laminating stained glass onto large panels of 1/2-in. laminated tempered glass to meet hurricane and earthquake codes. Pictured: West Angeles Cathedral's 108-ft.-high stained glass tower with its 652-ft.-long by 8-ft.-high stained glass clerestory band.

800-452-7796
www.bovardstudio.com

| Circle Reader Service #175

Glass Tunnel Project

8 Doors & windows



Nathan Allan Glass Studios, Inc.

For this project, 1/2-in. thick Crystal Series Cognac Glass was installed in Fendi's home office in Rome, Italy. The glass was pinned to the walls and fitted with Dorma Hardware's sliding systems for the entry and exit to this elaborate glass tunnel. All vertical panels are tempered, and ceiling panels are both tempered and laminated. This project was produced for Fendi and designed by Peter Marino Architects in New York City.

604-227-8533
www.nathanallan.com

| Circle Reader Service #178

Double Action Doors

8 Doors & windows

Eliason

Easy Swing® Doors manufactured exclusively by Eliason Corporation. Model PMP-2 high impact traffic door reinforced throughout the impact area and back spline. Prevents cracking at hinge location and warping at swing edge. Strong, durable, and yet flexible enough to absorb the initial impact without the use of spring bumpers. Excellent for use in sales to stock room use. All doors are custom manufactured to your finished opening. Uses of doors range from sales to stock room, walk-in coolers, delis, secondary freezer doors, restaurants, or just personnel doors. Easy to install.

800-828-3655
www.eliasoncorp.com

| Circle Reader Service #176

Retractable Roof Enclosures & Skylights

8 Doors & windows

OpenAire Inc.

Custom-designed retractable roof structures and operable skylights capable of spanning up to 140-ft. At the touch of a button, motorized panels retract to open up to 50% or more of the roof area. OpenAire can span up to 140-ft. and do custom designs (domes, barrel vaults, biparting, etc.) using its exclusive maintenance-free, thermally broken aluminum framing. These enclosures and operable skylights are perfect for indoor waterparks, pools, atria, and anywhere that you want to bring the outside in.

www.openaire.com

| Circle Reader Service #179

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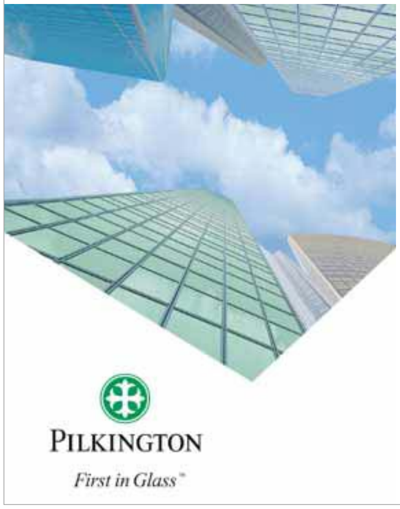
Glass

8 Doors & windows



Pilkington

Pilkington North America is a total glass solution provider. Pilkington has a solution for every glass requirement, whether that requirement is to control energy usage, protect against fire, insulate against noise, provide safety and security, display decoration and privacy, or build all glass facades. For more information or to order samples and literature, please call 800-221-0444 or e-mail building.products@us.pilkington.com. Visit www.pilkington.com.

800-221-0444
www.pilkington.com

| Circle Reader Service #180

Door Hardware Products

8 Doors & windows

New Restoration Hardware

Richards-Wilcox

Richards-Wilcox manufactures a line of specialty door hardware products for the antique reproduction market circa 1880 through 1950. With over 25 different types of decorative hinges, hinge straps, cast iron handrail brackets, and antique flat track, and hangers, Richards-Wilcox supplies many choices for swinging, hanging, and bi-fold door hardware in traditional building or historic applications such as coach houses, garages, roundhouses, barns and stables. For more information call Richards-Wilcox or visit their web site.

800-877-8456
www.rwhardware.com

| Circle Reader Service #183

Self-Cleaning Glass

8 Doors & windows

Pilkington

A revolutionary new kind of glass that uses the power of the sun to clean itself. Pilkington Activ™ Self-Cleaning glass uses UV energy from the sun to keep windows clean naturally through a photocatalytic process that gradually breaks down and loosens dirt and organic materials, as well as a hydrophilic action that causes rain to sheet on the glass, carrying dirt away with minimal spotting or streaking.

800-221-0444
www.pilkington.com

| Circle Reader Service #181

Electronically Tintable Glass

8 Doors & windows

the power to change
At your fingertips, glass that tints to control the sun. Stop solar heat gain and eliminate glare without ever losing your view.
SageGlass

SAGE Electrochromics, Inc.

In the making for over a decade; durable, tested glass that tints at the push of a button. SageGlass® electronically tintable glazing eliminates having to choose between a design that maximizes the positive attributes of the sun—daylight, view, connection to the outdoors—and one that attempts to minimize its drawbacks—heat gain, glare, and fading. You get unprecedented solar control without the need for blinds, so the view and your design intent are preserved.

877-724-3321
www.sage-ec.com

| Circle Reader Service #184

Fire-Resistant Glass

8 Doors & windows

Pilkington North America - Fire Protection Glass

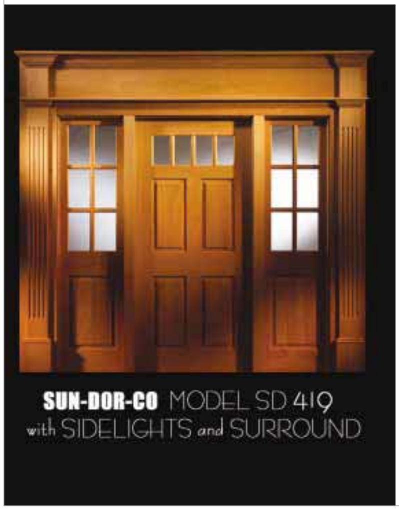
Pilkington Pyrostop™ is available with many options including opaque films, colored interlayers, surface designs and lightly sandblasted. Pilkington Pyrostop™ can also be combined with any of the Pilkington products to meet your design needs. For more information contact Technical Glass Products or see www.pilkington.com/fire or www.fireglass.com.

800-426-0279
www.fireglass.com

| Circle Reader Service #182

Custom Doors

8 Doors & windows



SUN-DOR-CO

SUN-DOR-CO will handcraft any custom door your creativity and client requires. SUN-DOR-CO makes it possible, and practical for you to source your client a beautiful one-of-a-kind door of the highest quality. 50 years of experience assures you an exceptional hand-crafted door, as shown in this photo of a door-surround. SUN-DOR-CO turns your door design and your client's dream into reality in less than 60 days.

800-835-0190
www.sundorco.com

| Circle Reader Service #185

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T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Glass Walls, Facades & Partitions

8 Doors & windows

Technical Glass Products

Technical Glass Products offers Pilkington Profilit™—an exciting translucent glass option for commercial and residential applications. Profilit uses self-supporting cast glass channels in aluminum perimeter frames to create glass walls, facades or partitions that are opaque but also transmit light

888-397-3473
www.tgpamerica.com

| Circle Reader Service #186

Fire-Rated Glass Walls

8 Doors & windows

Ermenegildo Zegna
Ermenegildo Zegna
Ermenegildo Zegna

VETROTECH Saint-Gobain

Architects want creative freedom and maximum transparency, while at the same time respecting fire resisting building regulations. Vetrotech Saint-Gobain introduces the SGG SWISSFLAM STRUCTURE all glass system, suitable for many interior applications, like partition walls in offices, schools, or in shopping centers. SGG SWISSFLAM STRUCTURE is a patented system of SGG SWISSFLAM-60 sheets connected by a thin discreet border resulting in a perfect fire-resistant seal. Fully tested 60-min. "butt-joint" glass wall; provides CAT II High Impact Safety and enhanced clear vision area.

888-803-9533
www.vetrotechUSA.com

| Circle Reader Service #187

Custom Accordian Doors

8 Doors & windows

Woodfold-Marco Mfg., Inc.

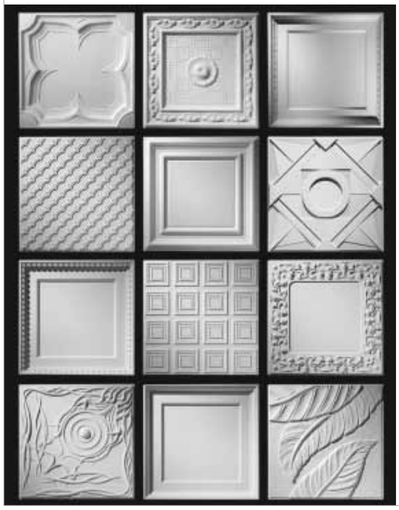
Woodfold custom made accordion folding doors fill a variety of needs in America's schools. Totally suspended from overhead track, with sight, security and acoustic models available, Woodfold can bring the world to your classroom. Their solid hardwood roll-up doors coil conveniently overhead and are ideal for food service areas, bookstores, and reception areas. Woodfold doors are available through an established network of building product specialty distributors. Fax number 503-357-7185.

503-357-7181
www.woodfold.com

| Circle Reader Service #188

Ornamental Plaster Ceiling Tiles

9 Finishes



Above View Mfg., By Tiles, Inc.

ABOVE VIEW ornamental plaster ceiling tiles are fabricated from a non-toxic, non-combustible, proprietary composition. They drop into any standard 15/16-in. T-Bar grid system. There are more than 50 standard designs, custom design work, and 1300 custom colors and faux finishes available upon request.

414-744-7118
www.aboveview.com

| Circle Reader Service #189

Granite & Limestone Materials

9 Finishes

Ancor Granite Tile Inc.

Ancor Granite Tile is now pleased to afford you the design freedom and distinction you have been denied to date. Think of custom sizes: 12-in. by 16-in., 12-in. by 18-in., 16-in. by 24-in. in over 100 granite and limestone materials. Ancor is pleased to offer tiles up to 24-in. by 24-in. and sizes in between from 3/8-in. to 1-1/4-in. in thickness, in a variety of finishes from high polish to matte, textured and antiqued. Put their 20 years' of specialization to work for you. Usher in a new age of stone design. Contact Ancor to discuss an upcoming project idea; they look forward to hearing from you.

www.ancor.ca

| Circle Reader Service #190

Ceiling & Wall Metal Panels

9 Finishes

Chicago Metallic

Traditions™ embossed metal ceiling and wall panels from Chicago Metallic combine the look and feel of finely crafted antique embossed tin and ornate plaster. Over forty panel and cornice design choices. Nail-up, lay-in and concealed snap-in options. Painted and anodized finishes. Perforations are available for acoustical performance up to NRC 0.95. Visit their web site.

800-323-7164
www.chicagometallic.com/traditions

| Circle Reader Service #191

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Colorful Opaque Glass Coating

9 Finishes

Goldray

LCBA is an opaque finish available in a wide palette of standard and custom colors including solid and metallic. Goldray can create custom designs for your wall cladding projects by silkscreening logos or patterns in addition to an opaque coating of LCBA. This combination of products adds much more flexibility to your designs for interior or exterior spandrel applications. Glass cladding is an impact- and abrasion-resistant product, which is easy to clean and very low-maintenance. Visit Goldray's web site for more information on this and other innovative products.

800-640-3709
www.goldrayindustries.com

| Circle Reader Service #192

Porcelain Floor Tiles

9 Finishes

Viva Ceramica

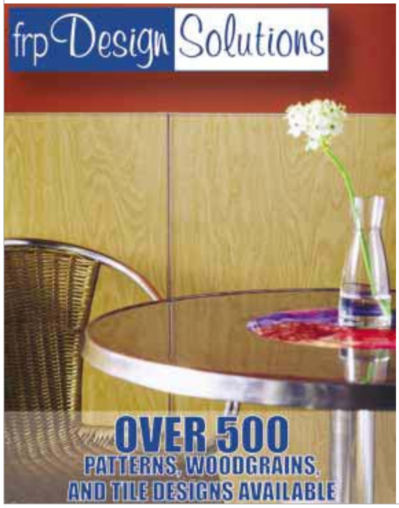
VIVA LIMITED EDITION is a new collection of floor coverings with exclusive distribution. The collection includes MAXI floor tiles: 12mm glazed, color-through, very large sized porcelain tile with graphics reminiscent of wood.

www.cerviva.it

| Circle Reader Service #195

Decorative Wall Panels

9 Finishes



Kemlite Company

frpDesign Solutions is a family of decorative wall panels that provides an alternative to traditional wall coverings such as ceramic tile, wood paneling or vinyl wall coverings. Offering both functionality and design, products in the frpDesign Solutions line are made of a moisture-resistant frp panel with a decorative finish that includes myriad colors, patterns, and woodgrains, as well as a tile-look panel. Available with over 500 hundred choices, frpDesign Solutions is easy to install and maintain. For more information, visit Kemlite on the web.

888-332-6377
www.frpdesignsolutions.com

| Circle Reader Service #193

The Cornerstone of Every Great Kitchen

10 Specialties

BLANCO AMERICA

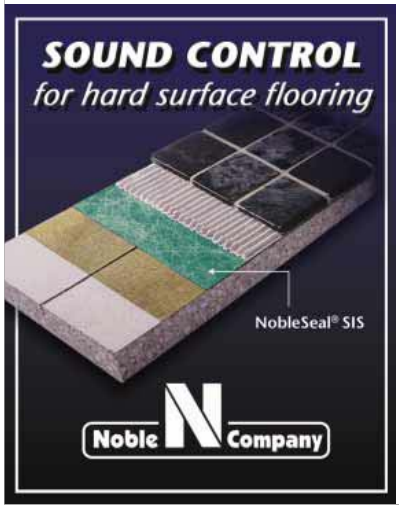
BLANCOPRECISION injects a breathtaking surge of adrenaline into the classic apron-front style. Architecturally inspired and passionately engineered, each sink is superbly handcrafted from a single piece of premium quality stainless steel for a near seamless appearance. Striking zero radius bowls add to the innovative approach, setting a visionary new benchmark for this popular design.

800-451-5782
www.blancoamerica.com

| Circle Reader Service #196

Reduce Impact Noise

9 Finishes



The Noble Company

NobleSeal® SIS is a sheet membrane that reduces the impact noise produced by hard surface flooring (like tile and hardwood floors). SIS is only 3/64-in.-thick so it minimizes problems with transitions and the need to alter door and cabinet heights. It is effective at reducing noise (IIC=62; STC=59). SIS can be installed over all common substrates, even gypsum concrete and radiant heating systems. SIS can also protect thin-set tile from cracking and provide waterproofing. Visit their web site. Email richard@noblecompany.com

800-878-5788
www.noblecompany.com

| Circle Reader Service #194

Shoji Screens, Architectural Doors & Lighting

10 Specialties

Cherry Tree Design

Experience the Artisan Touch—sophisticated design, exceptional craftsmanship, natural warmth. Shoji Screens, architectural interior and exterior doors, lighting fixtures, portables and mirrors. Handcrafted in the USA using exceptional joinery, solid hardwoods, and beautiful, durable facings. Unique designs featuring Contemporary, Asian, and Arts and Crafts styles. Perfect for commercial, hospitality and residential projects. Call to learn more about Cherry Tree Design's complete product line, or visit their new web site.

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www.cherrytreedesign.com

| Circle Reader Service #197

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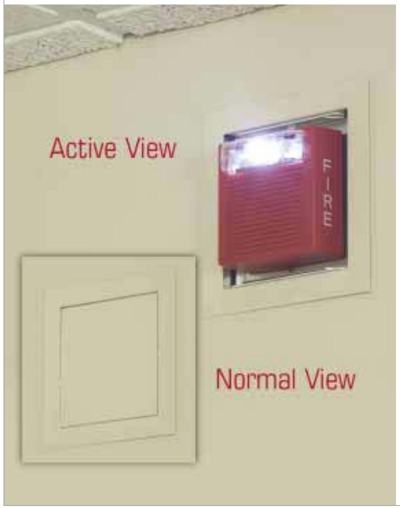
Concealed Alarm

10 Specialties



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Extruded Aluminum Shelves

10 Specialties

Rangine Corporation/Rakks

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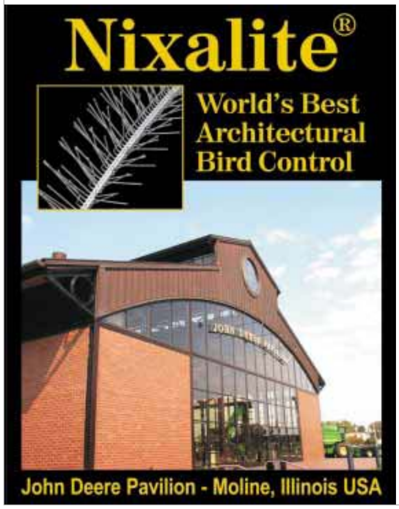
| Circle Reader Service #251

Architectural Bird Control

10 Specialties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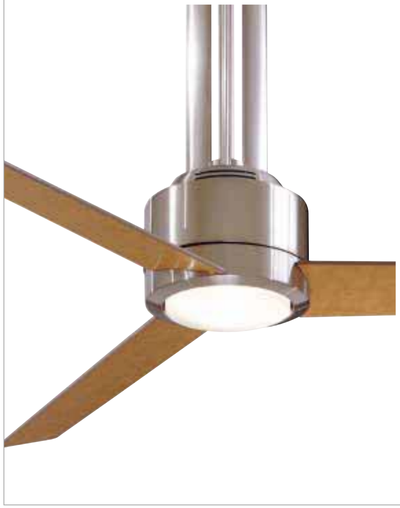
Ceiling Fan

12 Furnishings



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10 Specialties

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12 Furnishings

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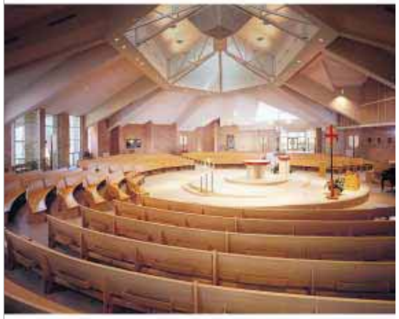
Curved Church Pews

12 Furnishings



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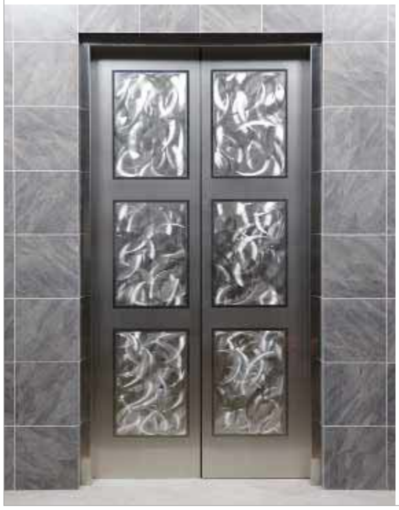
Elevator Door Facings

14 Conveying systems



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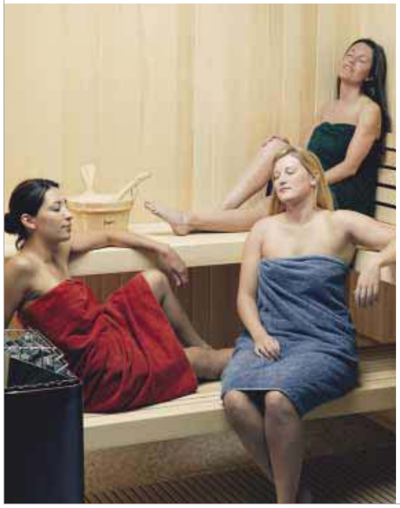
Saunas

13 Special construction



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14 Conveying systems

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www.inclinator.com

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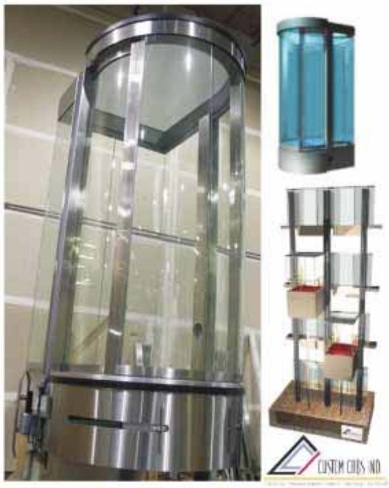
14 Conveying systems



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15 Mechanical

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15 Mechanical

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Innovative Lighting

16 Electrical

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16 Electrical

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Interior & Exterior Lighting Applications

16 Electrical

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16 Electrical

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CP Lighting

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16 Electrical

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Dr. Stephanie Barczewski, Assistant to the Dean
College of Architecture, Arts & Humanities
118 Lee Hall, Box 340501
Clemson University
Clemson, SC 29634-0501
(e-mail: sbarcze@clemson.edu)

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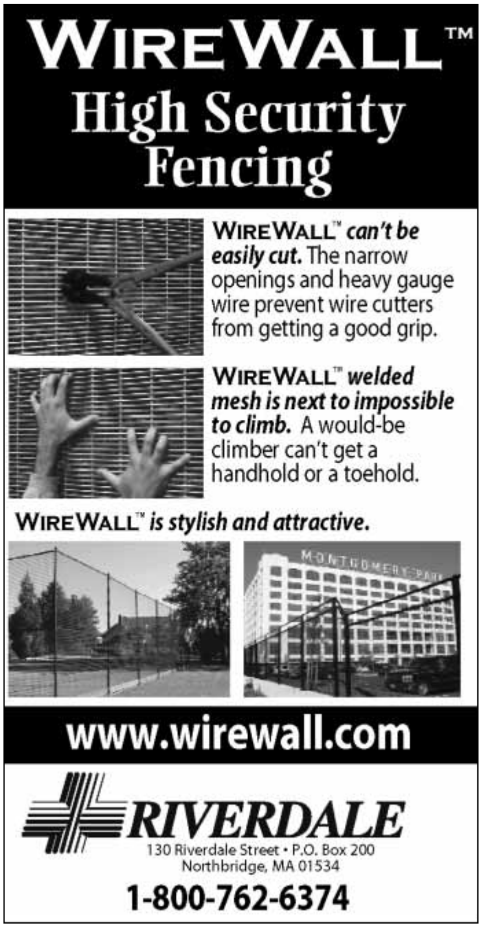

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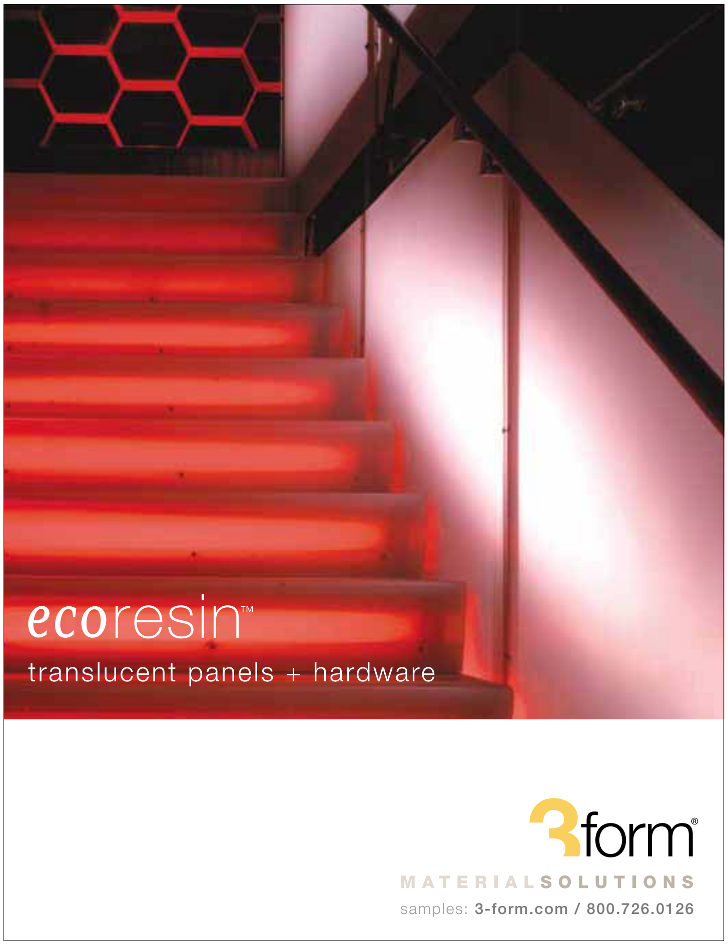

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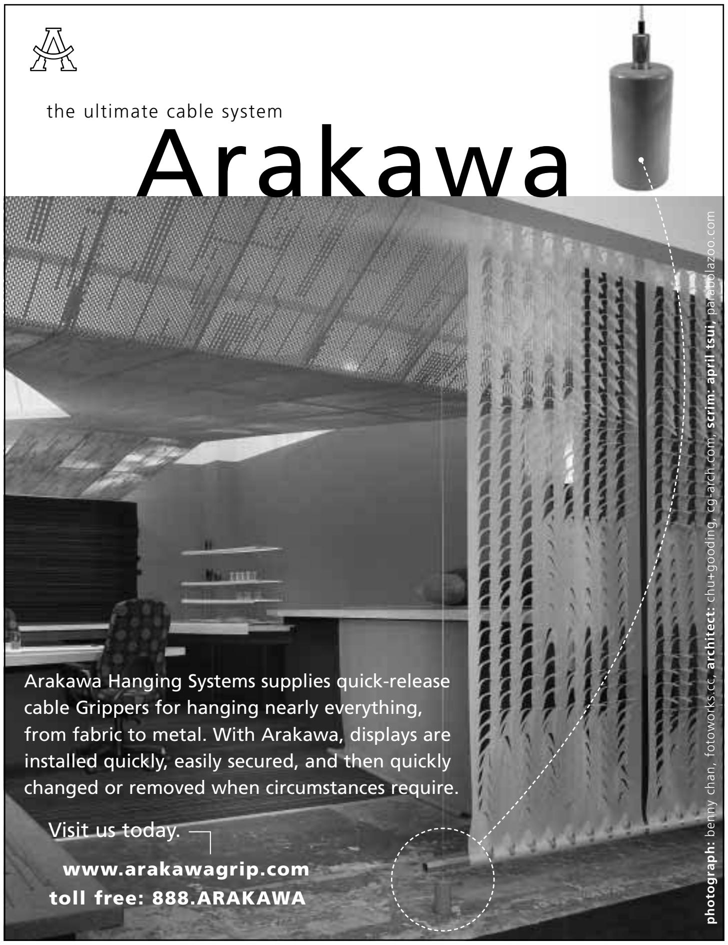

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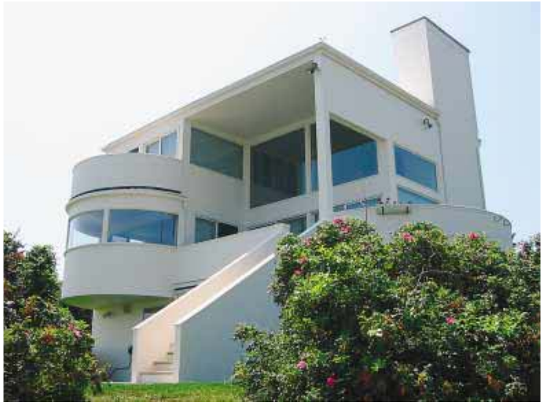
From the pages of ARCHITECTURAL RECORD 1970

Badly altered, but still loved

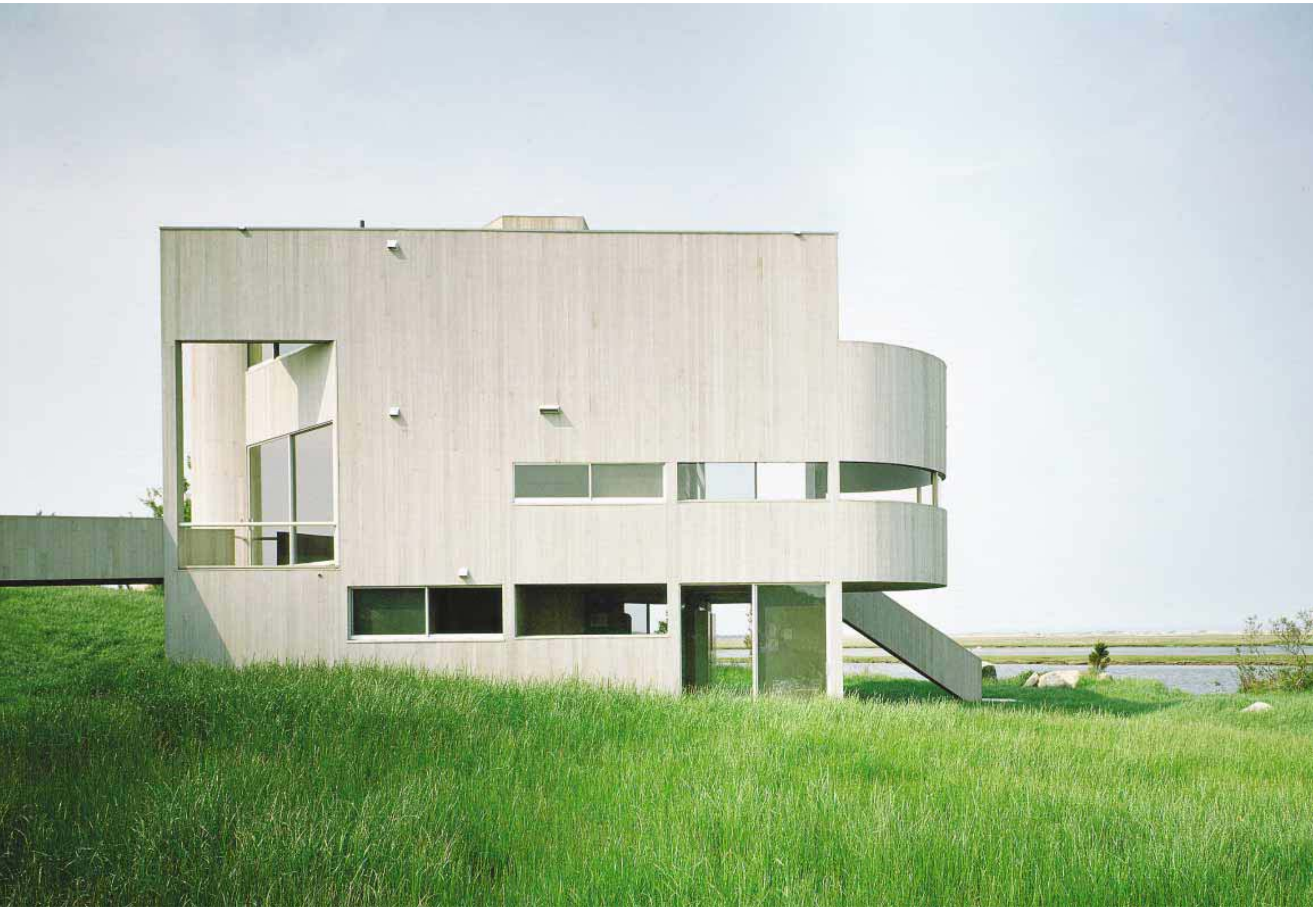
By Charles Linn, FAIA



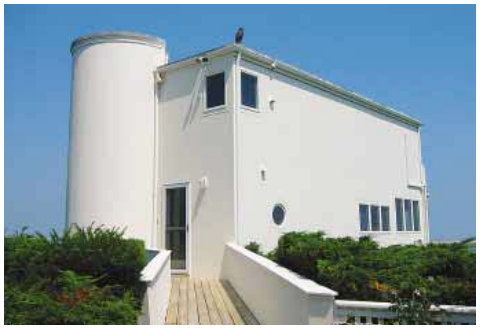
PHOTOGRAPHY: © PATRICIA CROW

Gwathmey Henderson Siegel's Cooper House was built on Cape Cod near Orleans, Massachusetts, in 1968. Charles Gwathmey, FAIA, recalls that the client had loved several of his early houses and that this one was "the same sort of formal investigation into materiality of the early East Hampton houses, including my parents'." The open, light-gray, wood-paneled house stands proudly alone on a peninsula that juts out into the bay, and is still a striking contrast to the Nantucket Cottage–styled houses in the neighborhood. Jim Hadley, an architect who is also president of the Orleans Historical Society, says he's been watching the house since 1974, and that students and fans of architecture "from all over" take pilgrimages to study it.

Unfortunately, the ensuing years were not kind. According to its current owner, William Carr, it was used as a weekly summer rental for most of its life, and poorly maintained. Electric wall heaters substituted for the hot-water heating the architects specified were wholly inadequate, rendering it uninhabitable much of the year. The flat roof leaked "from day one." Aluminum windows and sliding-glass doors jammed, the siding turned brown, and the cantilever beam supporting the



This page and previous: **The windswept site of the Cooper House has always made it hard to maintain, and during the "Perfect Storm" in 1991, it was severely damaged. When it was repaired, the entry was enclosed, new windows and doors that did not match the originals were installed, and the house was painted white.**

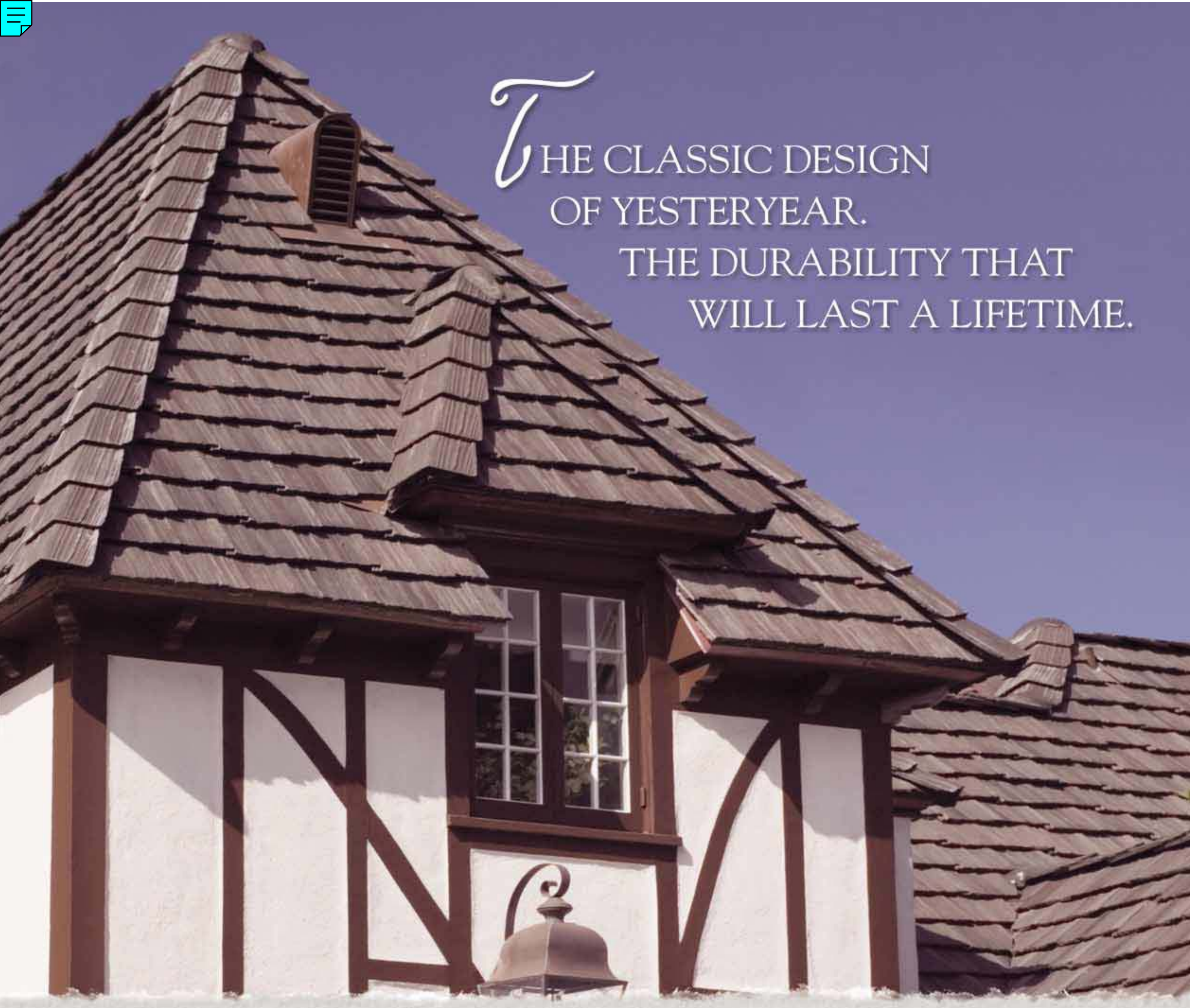


(continued from previous page) balcony rotted away. In the midst of the S&L crisis, the house wound up with the Resolution Trust Corporation, unoccupied and uncared for.

In October of 1991, the house took a severe three-day beating during the famous tempest chronicled in print and cinema as *The Perfect Storm.* According to Carr, who owned a house down the road, siding was ripped off, windows were blown out, surf flooded the ground floor, and as before, the roof leaked. When the owner of the house had it repaired, many of the delicate, Minimalist details that were integral to its elegance were lost. For example, bulky new windows and sliding glass doors were installed, gutters and downspouts were appended, and a column shored up the balcony. The house was painted white. The decision to enclose the entry porch so the kitchen, master bedroom, and two bathrooms could be enlarged was arguably the worst decision, although addition of a porthole in the guest bath is a close second. Gwathmey puts it mildly when he says, "You can't sort of start adding in a way that is totally antithetical to its spatial geometry and hope to maintain the integrity of the house."

In 2001, the house was put on the market for $3.5 million. Carr was among its admirers, and he bought it at a reduced price in 2003. He says the work that disfigured the house is a sore subject, especially with his wife. "They really took away a hunk of the architectural concept. Still, it's a true gem … one of the seven wonders of the world. All kinds of people want to look at it and, excepting the bad elevation, they love it." He says the couple discussed restoring the front entrance, but gave up on the idea because it would eliminate the rooms enlarged during the remodel. "Life is somewhat of a compromise," he says, "and you have to evolve." ■

PHOTOGRAPHY: © BILL MARIS (TOP); PATRICIA CARR (BOTTOM)



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